

MASSACHUSETTS PLOUGHMAN



VOL. LVII. - NO. 30.

BOSTON, MASS., SATURDAY, APRIL 23, 1898.

WHOLE NO. 2939

MASSACHUSETTS PLOUGHMAN
JOURNAL OF AGRICULTURE

Official Organ of the N. E. Agricultural Society

LINUS DARLING,

PROPRIETOR

ISSUED WEEKLY AT

JOHN HANCOCK BUILDING

178 DEVONSHIRE STREET, BOSTON, MASS.

NEW YORK OFFICE,

150 NASSAU STREET, NEW YORK CITY.

TERMS:

\$2.00 per annum, in advance. \$2.50 if not paid in advance. Postage free. Single copies 5 cents.

No paper discontinued, except at the option of the proprietor, until all arrearages are paid.

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6 1-4 cents for each subsequent insertion.

AGRICULTURAL.

In a small garden worked by hand, one man with a wheel hoe can do the work of several men with a common hoe.

To prevent pigs from getting the thumps compel them to take plenty of active exercise. The busy pig seldom gets sick.

A good vine for banks or places where it is desirable to keep the earth firmly in position is the Virginia creeper or the Japanese honeysuckle.

Farmers who have no silo should plant some mangel this spring. They provide a lot of cheap and juicy-food and they are better than medicine.

Liquid manure is a very quick acting fertilizer, especially for grass. It loses nitrogen quickly and should be applied as soon as possible after being made.

ANTS sometimes give a good deal of trouble on lawns. They can be disposed of quickly by pouring an ounce of bi-sulphide of carbon into the several holes, then closing the holes.

A good treatment for the strawberry bed that has been mulched during the winter, is to remove the mulch, stir the ground around each plant, and then to replace the mulch. The result will be lots of berries and they will keep clean.

An article has been published in some of the poultry papers stating that sassafras poles used for perches would prevent lice—nonsense. Another tells how to kill hawks by giving nux vomica to chicks in their feed—more nonsense.

W. A. CROSBY.

Asparagus has been recommended as a lawn plant and has occasionally been used as such by setting a few plants here and there in borders on the margin of shrubbery, as single plants and in small groups. If one did not know the useful character of asparagus it would be considered highly ornamental.

A mixed crop of oats and Canada peas came next to corn in tests made in Cornell Station. The crop is pronounced worthy of a place on every farm where stock is kept, being valuable for a pasture, for soiling and for hay. The yield was 12 tons per acre, green. Oats and peas should be planted as early in the spring as condition will permit.

STUDIES of the root system of red clover grown at the Minnesota Station showed that the amount of roots and the depth to which they penetrate vary greatly, depending on the character of the land. In a favorable soil a plant one month old had a root extending seven inches into the ground; at two months old it had reached a depth of two feet; at five months its length was five feet six inches. The root development is most extensive on drained land. The stand is also better on drained than on undrained soils.

Scheele's Green.

This arsenic poison is in color like Paris green, but it is cheaper and more soluble. For that reason it is becoming popular as a substitute, and it is considerable less trouble to keep it stirred when mixed with water than with Paris green. Its strength is about equal to that of Paris green.

Selecting Asparagus.

In starting an asparagus plantation much depends upon the selection of plants. Choose crowns with large buds and well developed roots. One year old plants are fully as good as two year olds.

Asparagus plants are male and female. The male plants which do not bear seed are to be preferred, because all the strength goes to the roots making larger and earlier stalks the following spring. It is asserted that a plantation of male plants will produce a third more than a field of female plants. The stalks from the male plants are larger and finer and command a higher price.

Melons for Stock.

Some of the Western stock farmers feed large quantities of citron melon to stock.

The variety used is a cross between the small citron and a large kind of watermelon, it reaches a weight of twenty pounds or more. These melons are grown in the same manner as common varieties. The yield is enormous, and the melons make excellent, juicy food for both cattle and poultry. They are rather watery and have only about a third of the nutritive feeding value per ton of corn ensilage; but their greater value is to furnish a change and keep up the health and appetites of stock fed largely on dry food.

In some respects therefore the melons are a good substitute for silage. The yield is twenty tons or more per acre, and the cultivation is easy. They are fed to stock in about the same manner as stock beets or turnips, being chopped quite fine or sliced.

Have a Standard.

In a paper have recently read an extract from some experiment station bulletin, advising dairymen to ascertain the tastes of their customers for butter and then furnish each customer just the kind of butter preferred. The quotation took the ground that even if a customer had a peculiar or even unnatural taste it would pay a dairyman to cater to it, for if he succeeded in meeting it he could always retain such customer.

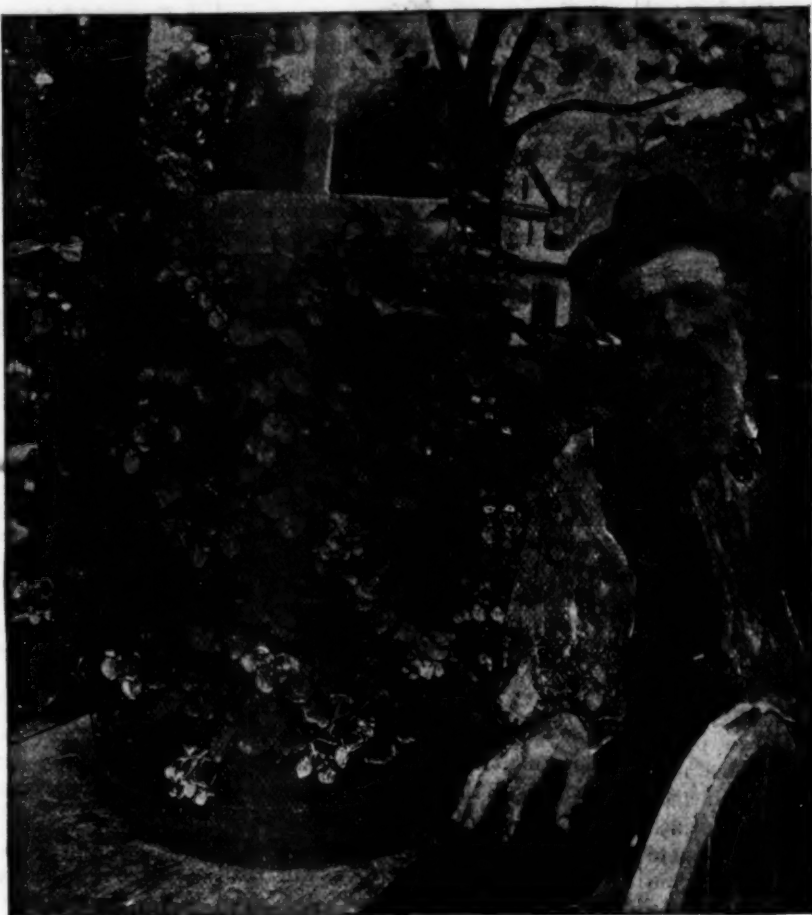
Now what earthly use can a standard of excellence for butter be if butter makers are not to be encouraged to attain to such standard. We have dairy fairs and employ expert judges to examine the butter exhibited and score it according to its quality. Now what can be the good of all this if butter makers are to be advised to chase around the villages and cities to ascertain the tastes of a half dozen or more customers, and then undertake to make a different kind of butter for each one. Can there be anything more absurd?

The common sense view to take of the matter is for every butter maker to aim to make butter that would be scored by an expert as high as the best commercial butter and make it as much better than that as they can. Then sell it on its merits and it will be the means of educating the consumers of the means of knowledge of a first-class article. Let it go at that. The writer trusts we will not hear any more nonsense about making a dozen different kinds of butter for a dozen different consumers. What would be thought of a manufacturer of any other article of food, that would undertake to cater to every conceivable taste instead of establishing a standard of excellence?

F. W. MOSELEY.

Clinton, Iowa.

It is a good plan to handle calves somewhat while they are learning to drink in order to make them tame. The great advantage of the home-raised calf is its tameness and good habits.



BARREL STRAWBERRY CULTURE.

Machine Milking.

The Ontario experiment farm at Guelph is still experimenting with a milking machine which it brought over from Scotland.

It is found that the milker saves considerable labor, and with a few improvements and changes it is expected to become practicable to do all the milking by machinery. One of the worst defects now is that the cupping allows dirt and impurities to get into the milk. The action of the machine imitates somewhat the sucking of a calf, and it is said that the cows behave more quietly than when milked by hand.

Subduing a New Milker.

Sometimes a cow freshly come to milk, or a young heifer, will give a great deal of trouble about milking. If the milker kicks or abuses the animal she is liable to be made vicious for life. To manage her, fasten her securely and pass a strap or rope around the body, just in front of the bag, letting it pass beyond the right hip and in front of the left. Draw this girth rather tightly, and then sit down to milk. The strap tightens the muscles, and although the animal may make some attempts to kick she will do no harm, and will soon get over the idea.

The Hardy Vegetables.

All the early vegetables do best on a medium loam soil. The following vegetables may be sown in April as soon as the ground can be worked: beets, cabbage, onion, parsley, parsnip, peas, radish, rhubarb, spinach, turnip.

Carrots will do better delayed until the first of May. Potatoes may be planted in April, but will also do well if not planted until the first of May in most seasons. Celery may be planted in the open ground any time during April and May, but nothing is gained by hurrying, as most of its growth is made late in the season. New plots of asparagus and rhubarb may be started any time in April and May. Most of the above vegetables will do well on stable manure, but radishes and turnips will be of better quality if fertilized with phosphate.

THE kitchen waste from a family of seven is found by a New Jersey experiment station to amount to over a ton and one-half per year, about two-thirds of which was vegetable matter. It is estimated that the kitchen waste of all the cities and towns of New Jersey is worth for fertilizer and other uses half a million dollars per year. The amount for Massachusetts would be over twice as much.

Barrel Strawberry Culture.

Our illustration this week, which is reproduced from the columns of American Gardening, represents an unique method of strawberry culture which has become quite popular and about which there has been much inquiry. It shows a barrel with a full crop of strawberries standing on a platform wagon, as Mr. Ohmer (who may be seen in the picture) exhibited it in the streets of Dayton, Ohio. Mr. Ohmer is very enthusiastic on the subject, growing last season sixty barrels on his place that averaged one-half bushel of strawberries to the barrel. He claims he can grow 1250 bushels of strawberries per acre with no weeds to fight, and no mulching, only plenty of water.

Mr. Ohmer's circular giving the details of cultivation and printed in American Gardening is as follows:

"Take any iron-bound barrel, except one which has been used for pickles, sauerkraut or vinegar; remove all hoops but four and bore four holes in the bottom. Then space holes around the barrel so that twelve plants will go around it; five rows high will make sixty plants to the barrel, (the fifth row can be placed five inches from top of barrel). So as to make the holes of proper depth, bore two holes, one above the other, using a bit one and one-half inches, and cut out the wood between the two holes, you will then have a hole one and a half by three inches. Put about two inches of firm gravel or coarse sand in the bottom of the barrel.

When planting put the plants as near the top of the holes as possible, to allow for settling of the soil. Use clay well mixed with rotted manure; put in till about three inches above the first row of holes, being careful not to have it too wet.

"The first row of holes must be eight inches from the bottom of barrel. Get in and tramp the soil solid, then loosen well, then put soil about one-half way up to the next row of holes. Now take a common drain tile, twelve inches long by three or four inches in diameter, put it in the center of the barrel and fill the tile with coarse sand, then fill up the barrel with soil a little above the next row of holes and tramp again. Be careful not to move the tile and when adding soil to the barrel, cover up the tile so as not to get any dirt in it. After planting the second row, lift the tile; see that the sand settles and fill the tile with sand again. Then put in soil above the next row of holes, tramp again and plant that row; and repeat operation until the five rows are planted. But don't fail to tramp.

"After planting, the tile remains in the barrel; have it empty so as to take the water. In watering, you water in

the tile for the lower rows; on top for the two top rows. It would be impossible to water the lower plants without the tile and the core of sand. You can water the plants too much. Fill the tile once per day, and put about two quarts of water on the outside of tile. After cold weather sets in we quit watering. The plants want no winter protection. Set the barrel on brick to keep it off the ground. If any should die in the summer, you can replant by taking a runner and putting the young plant in the hole, making it fast with two little sticks.

"Use the largest fruiting variety that does well in your locality, and a perfect blooming sort, if possible. Planted early in the spring, a fair crop may be expected the same season."

Early Melons.

Melons and cucumbers may be obtained early by starting the seeds on sods four inches square turned upside down and placed under glass. If kept well watered the plants will flourish, take root in the sod and be well started when the weather is warm enough to transplant them into the open field. This plan is about the only way one can be sure of watermelons in central and northern New England. Another way is to start seed inside of a turnip which has been scraped out, leaving only a thin wall. When the turnip is set out it will decay, allowing the melon to take hold on the soil.

Quantity of Seeds.

In planting a farm garden, it is sometimes doubtful how thick to sow the seed. Early in the season it should be sown thicker than when the soil becomes warm.

The following list will give an idea of how thick seed should be sown in garden culture: Asparagus, bed of fifteen square yards, one pint; Beet, row fifty feet, two ounces; Cabbage, bed of eight square yards, one ounce; Carrots, drill of one hundred and twenty feet, two ounces; Celery, four square yards, one ounce; Endive, four square yards, one ounce; Bush beans, row eight hundred feet, one pint; Leek, two square yards, one ounce; Lettuce, four square yards, one ounce; Onions, nine square yards, two ounces; Parsley, row eighty feet, one and a half ounces; Parsnips, drill of two hundred feet, two ounces; Peas, early, row sixty feet, one and a half pints; Potatoes, row thirty feet, half peck; Radishes, four square yards, one and a half ounces; Spinach, ten square yards, two ounces; Spinach, drill of one hundred and twenty feet; two ounces; Turnip, four square yards, one ounce.

Massachusetts Horticultural Society.

[Address on "Plants and Parasitic Fungi," by Professor Edward A. Burt of Middlebury College.]

Professor Edward A. Burt of Middlebury College, Middlebury, Vt., delivered a lecture recently before the Horticultural Society on "Resistance of Plants to Parasitic Fungi." He said in part:

Fungi are plants with the vegetative body not differentiated into stem and leaves. They do not contain the green grains called chlorophyll and they are propagated by spores. There is of late so much said of the destructive work of parasitic fungi that one must not conclude that all fungi exist only to cause disease or death of plants. When the horticulturist sees his plants ruined by rust, the damping-off fungus, mildew and the like, and realizes that all these troubles are due to fungi, he sees small compensation in the mushrooms he has raised and concludes that fungi could be well spared from the world.

Fungi have an important and a peculiar work in the world's economy. The green plants are constantly converting the inorganic matter of the soil into material for their own use. Only a small part of this material is used as food by animals, and is broken up into simpler compounds and returned to the soil.

At the end of the season the unused plant matter remains to accumulate on the ground, and if left untouched, in the form of dead leaves or wood, this matter would be of no value to the soil and its stores of carbon, nitrogen, etc., could not be used in that form as food for green plants. Decay must take place first. Fungi are the causes of decay, and they, in forms ranging from bacteria, to mushrooms, attack the decaying vegetable material and make prompt return to the soil of the plant and animal remains which would otherwise be withheld from it.

We now turn our attention to fungi in their injurious relations to plants. Parasitic fungi are those which draw their nutriment from living plants, by penetrating their tissues. Parasitism depends on the ability of the fungus to maintain its existence on the host and on the inability of the latter to repel the invasion. The spore of an obligate parasite must fall on a suitable species, and then germinate and throw out a germ-tube to penetrate the host. This must be done before the small amount of food substance in the spore is exhausted. This is a very critical period, and many of the spores do not survive it. Then after germination too dry an atmosphere will kill the parasite. An equally fatal result follows if the delicate germ-tube has to creep over a surface coated with poisonous salts or other fungicides; this is the philosophy of spraying for fungi as now practiced in horticulture. Then the fungus must be able to penetrate the defensive structures on the outside of the host, and must maintain its existence from food derived from the living food.

The nature of the attack made by fungi against each surface of the host, and the resistance encountered, may be considered with advantage in connection with some common diseases which have been best studied. Fungi which attack the roots of some plants gain an entrance through the soft structure of the tips of the rootlets, or by passing by way of the root hairs through the harder parts of the root. The fungus causing the club foot of the cabbage, turnip, etc., causes the leaves to wilt and become yellow in from three to five weeks, and the characteristic swellings may then be found on the roots. This disease is especially troublesome to truck farmers, because they do not practise a long-period rotation of crops. Parts of infected roots are left in the ground and the spores liberated by their decay live several years, and so infect the crops planted the following season. Air-slaked stone lime is an effective preventive of club foot. From 75 to 150 bushels per acre should be spread on the ground in the fall and not turned under until spring. Applications should be made every other year to severely clubbed land on which

turnips or cabbages are grown yearly. Little is known of the resistance which plants offer to this disease. One of the Cruciferae which is most susceptible to this disease seems to escape extermination because its seeds are so widely distributed that not all fall in an infested seedbed.

Infection of the root is more often by mycelium, which creeps from root to root only a few inches below the surface of the ground. The stem of herbaceous plants and the leaves and young shoots of woody plants are covered by a layer of cells called the epidermis, the outer walls of which is waterproof and prevents rapid evaporation of moisture from the tissues of the plant. Water vapor is constantly exhaled from the epidermis through openings called stomata. The epidermal covering withholds from spores on its surface moisture which is necessary for their germination, and in dry weather they generally fail to germinate. A long period of moist weather, however, favors germination and enables the germ-tubes to attack the epidermis. In the powdery mildews a cylindrical thread, called a hypha, branches and spreads over the surface of the epidermis, and at various points branches push down and gain entrance into the protoplasmic part of the cell. Here the end enlarges. Such branches are called haustoria, and through these the fungus draws its sustenance from the host, and the hyphae remain on the surface, forming the familiar white patches. These powdery mildews are easily destroyed by any substance poisonous to the fungus but not to the plant (such as flowers of sulphur) being dusted over the leaves.

The bacterial brown rot of cruciferous plants is of great interest because the infecting organism so successfully avoids the outer defences of the host. The cabbage has openings along the margins of its leaves, called water pores, from which superfluous moisture escapes and stands in drops along the edge of the leaves. Bacteria which are lodged there simply swim through the pores into the leaf and there spread the disease. Infection also occurs by bits of insects which have been feeding on diseased plants.

The bark of woody stems forms an effectual barrier against parasitic fungi very destructive to wood. When wounds occur which break through the bark, they are repaired by the new growth of cork or of callus and cambium which the tree makes. In deciduous trees we can cover the wound by grafting wax or paint and so diminish the risk of infection. The mycelium of many fungi extends only a short distance beyond the point of infection. This is the case with "spot disease" of leaves. In other diseases the spread may be greater and even cause the death of the whole plant.

Healthy, vigorous plants are less subject to disease than feeble ones. Fully ripened fruit is very subject to rot. Tubercles states that fungi can frequently penetrate withering plant organs, while they could not infect the fresh living tissue. In some cases a fungus, though well established, may receive such effective resistance as to make headway when the vital processes of the host are dormant. The fungous parasite of the European larch only makes headway in autumn and winter.

Protracted dull weather is likely to cause an epidemic of fungous diseases, both because it favors the germination of spores and because it weakens the vitality of the host plant. The vital processes of the cells are so lowered that the poison with which the fungus attacks cannot be resisted. Some varieties and species are more resistant than others. In the past cultivators have thought more productiveness, color, flavor, beauty, etc., and not enough of the abilities of varieties to resist parasitic fungi. Japanese plums, with their greater freedom from the black knot, are well worth the consideration they receive. By careful hybridizing experiments, Europeans have obtained vines capable of resisting phylloxera and downy mildew. Erickson's researches have shown that there are some varieties of wheat able to resist the most frequent kinds of rust. He has also found that disease is transmitted to the descendants of plants, though hitherto the opposite has been thought to be true.

POULTRY.

Success with Ducks.

ED. MASSACHUSETTS PLOUGHMAN:

DEAR SIR:—Last year I raised about 100 young ducks from a single pair. They grew twice as fast as chickens and ate about twice as much. Still I think with a little more experience I can make them more profitable than chickens. I have no water excepting wells on the farm and do not think it necessary, although a running brook or a pond hole would help them get their living. I keep the White Pekin variety.

The old ducks laid their eggs very early in the morning and I had to watch them to prevent the eggs getting chilled. The duck eggs were all hatched under common hens. The ducklings need plenty of grass. There is no trouble in feeding them as they will eat almost anything and a great deal of it. I gave them scalded oatmeal and boiled potatoes mashed together, also scalded corn meal and bran with as much milk as I could spare. I fed them often, but gave them only what they would eat up clean. They must have plenty of water to drink, and their feed trough and fountains must be kept clean or the ducks will get sick.

J. B. WESTON.

Massachusetts.

Young Turkeys.

The eggs hatch in twenty-eight days. As with chicks, the young turkeys require no food the first twenty-four hours. After that period take them from the nest to a large, dry coop supplied with water and coarse sand, and give them a meal of millet seed or other suitable food. Stale bread and milk is excellent. Many growers feed them with milk curd and some give boiled rice.

After the first three weeks, they can be given corn meal and short mash, and any kind of grain. If there is plenty of room for them to forage, they will get most of their own food in summer after the first few months.

Dryness and freedom from lice are absolute essentials. The roosting coops should be perfectly dry and the young turkeys should be shut up in the morning until the dew is off the grass. Both the turkeys and their mother should be dusted with insect powder if lice are suspected. Grease on the heads and under the wings will also kill lice.

The turkeys should be encouraged by feeding to come home every night, else some of them are likely to get lost or killed by their natural enemies.

Leg Weakness.

EDITOR MASSACHUSETTS PLOUGHMAN:

DEAR SIR:—My chickens which are kept in a steam-heated brooder house seem weak in the leg. They are unable to stand in some cases and have no life about them.

E. F.

Hamden Co., Mass.

Answered by B. F. Shoemaker.

Leg weakness is found chiefly among chicks raised in a brooder warmed by under heat. Or it is sometimes brought about by high feeding; in this case their bodies grow too fast for the strength of their legs. If the bottom of the brooder is slightly warm it will do no harm, but the most of the heat should come from above, and then you will scarcely be troubled with leg weakness among chicks. Those that have leg weakness will in course of time come out all right, without the aid of medicine, and they usually make the finest specimens as only the most vigorous chicks become affected. Feed finely ground raw bone in the soft food daily, which will strengthen their legs and will be the means of their rapid recovery.

Poultry Notes.

Grit is an absolute necessity, even for young chickens. Coarse, sharp sand is what they need. They know how to help themselves if they can get at it.

A popular food is granulated oats. It is in fact one of the best forms of grain food for young chickens, but plenty of soft food should be given also, such as bread and corn cake.

In feeding, I go into the pens and bury the grain in the leaves etc. with my foot. I have been asked by my visitors hundreds of times why I do this. I tell them my birds have to scratch for a living.

C. J. DANIELS.

Those who are making a living out of fowls almost always combine eggs and poultry. It is generally agreed in this section that eggs pay best of the two branches. But to raise some poultry also even up the work and the income in a more satisfactory manner.

Young chickens drink very often, and quickly soil the water with their dirty bills and feet. The automatic fountains, or other fountains that hold a great deal of water, will quickly get stale, and should be scalded out as soon as they begin to smell bad or they will breed disease.

A good and easy crop to grow for poultry is the turnip. Fowls like them either boiled or raw. When boiled soft they make an excellent mash with bran and corn meal. Turnips is the cheapest vegetable food that can be furnished. Hens must have something of the kind. For feeding raw, however, the cabbage is more convenient.

Do not go into turkey raising unless there is plenty of pasture unless you are prepared to go to the expense of fencing in a large area. Turkeys require more food and more liberty than chickens. Turkeys have a disposition to get a good share of their living off from the farms of the neighbors, and the arrangement is profitable so long as the neighbors do not take a notion to get a part of their living off the turkeys.

Set as many hens at one time as possible, the number also depending of course on requirements as well as space and convenience. It is a mistake to make nests in warm houses, in baskets or on wooden floors. No hens bring forth larger and healthier broods than those which make their nests under a hedge or thicket, exposed to all vicissitudes of the weather. It is wise to copy nature, therefore, in making the nest on the bare turf hollowed out just sufficient to prevent the eggs rolling out of it. A little broken or crushed straw will finish it, and make it look clean and tidy. Place a box or coop over each nest with a door or board in front to shut it up and which can be opened to let the hen out to feed and take exercise.

Belgian Hare Culture.

The Belgian hare is a native of Belgium, and is said to be much smaller than those we have here in England. The English fanciers have bred up, and improved upon it until they have obtained the present standard of excellence. They have evidently been crossed with other breeds to obtain size, for it is no uncommon thing to see an off color, too light or too dark, in the flock. But all should take great care in selecting breeders.

CARE AND MANAGEMENT.

A cheap plan is to take a goods box, three by four feet, lay it down on side, knock out one end, and stretch wire netting, one-inch mesh, across two-thirds of the end. Make a light frame to fit in the other third of the space, and cover frame with netting for a door. This makes a cheap hutch, and can be occupied by one doe. Another plan is to take small timbers about one and one-half by one and one-half or two by two inches square, make a frame five feet long, two and one-half or three feet wide and two feet high. Use hard wood lumber one-half or three-fourths inches thick, for the bottom, and box in about half of this frame, and enclose the other half with wire netting of one-inch mesh. Do not make any door or opening in the boxed part, but make door in netting, so that it will be convenient for cleaning out and also for putting in feed and water.

Larger hutches may be made for the young ones, or put them on the barn floor or mow floor, or in any kind of a shed. But see to it that there is no place for them to get out. A park may be made by making a good wire netting fence high enough to keep out dogs, and sink a plank or the netting into the ground so that they will not burrow under. Make a building in center, for a protection for the hares against stormy weather. They must have a dry place to get into. A pile of stumps or logs in the park would be very well for their amusement.

BREEDING.

This time of the year is a very good time to begin. Having each doe in a separate hutch and the buck in a convenient hutch, lift the doe from her hutch to that of the buck, and if she does not receive his attentions, place her in her own hutch and repeat each day. This will not have to be repeated often. Always be gentle and kind with them, and they will be your friend. A convenient hutch for a buck is the goods box as described, with lid on top so that it can be opened or removed. Never turn them loose. Don't do it. The Belgian hare is a good thing in its place, but don't make a nuisance of it. They will increase very rapidly. After the doe has visited the buck, she will kindle (or drop litter) in thirty days. If properly cared for, the young may be weaned in five or six weeks, and in a few days breed again. But a few days before she has her young she must be provided with straw or fine hay, which she will place in shape of a nice round nest, and line it with the soft fur of her body.

FEEDING.

Hares will eat of almost everything that grows on the farm. For winter feeding, clover hay, corn, oats, wheat, and, in fact, almost anything that your stock will eat. A little cabbage, beets or carrots with the dry feed are much relished by them. In spring and summer, commence gradually with clover, scraps of vegetables from the garden, or any kind of green stuff, keeping a little dry hay by them until they become used to the green food. Give them plenty of water all the time. The Belgian hare stands at the head of the list of all the varieties of the rabbit family, as an article of food. They are not used much for pets. There are many varieties more suitable for that purpose, such as the Lop-Eared rabbit, the Dutch rabbit, the Angora, Himalayan, Japanese, Polish, English and many others. But pleasure and profit can be more readily combined with the Belgians than any other species.—Farmers Guide

APIARY.

Spring Work Among the Bees.

I know by experience that it pays me to give close attention to my bees in the spring. The weather for the past month has been fine for bees and should be an incentive to do our best by them. Besides I find that while clover is making an excellent start, and everything points to another successful season. So, if we want to get the most out of the business, we must begin now.

The first essential is an abundance of honey. With a good fertile queen this means hives boiling over with bees by swarming time. If they have not at least ten pounds of honey per hive, by all means feed them. I know that the feeding of from five to ten pounds or more per hive of white sugar made into a thin syrup, and fed every evening about one-half pint per hive, is the best and most profitable work in the apiary. But if the bees have an abundance of honey it will not pay to feed them, as the filling of the combs might crowd the queen for room, thus curtailing the production of bees. But it will pay to uncap several square inches of honey every week or two, and interchange the brood frames now and then after settled weather, and use every means which can find out to make the bees consume lots of honey raising brood. If the queen is not reasonably active and fertile no amount of work will make the colony as profitable as it should be.

It is a good idea in some localities where pollen is not plentiful, to feed some wheat flour. Mix the flour with white sugar, about half and half of each, putting in some corn meal or a little bran, and spreading thinly on a board in a sunny spot near the hives, and where the wind won't strike. If the bees don't seem to work on it smear a little syrup on the board and they will soon find out what it means. I have seen them fairly swarm over it, tumbling over each other in their excitement as if the supply was very limited. It is an interesting sight to the beekeeper to see them cementing it on to their legs and other bees knocking it off about as fast as they put it on.

But one must exercise a good deal of judgment in feeding pollen, because combs filled with pollen that is dry and hard are an utter nuisance, and worse. They are then about worthless, as neither the bees nor the apiarist can do much with them. But it certainly encourages brood rearing, and a limited amount of it is all right.—Indiana Farmer.

Bees in the Orchard.

Many fruit-growers do not thoroughly appreciate the value of bees in an orchard or there would be more orchards with bees in them. Their value in an orchard was demonstrated in a most practical way at the Oregon Experiment Station some years ago. A few peach trees were forced into bloom in November and a colony of bees was placed in the house where the trees began to bloom. For some days, however, a heavy fog prevented the bees from working, although the flowers were open not a bee was seen upon them. The first bright day the bees set to work at once and remained at work so long as there was anything for them. The result was that not a peach dropped at the stoning season, the time all unfertile fruit falls. The crop was so heavy that it had to be thinned out. As a check test one tree was protected so that not a bee could get to it. On this tree all the fruit dropped at the stoning period. Bees and other insects have a duty to perform in the orchard, for which there is no substitute provided. This is the distribution of the pollen from flower to flower and from tree to tree. They insure success in the orchard and every fruit-grower should encourage the bees in their work by not spraying, or doing anything that would be injurious to the bees while the trees are in full bloom.

To Make Durable Fence Posts.

The following is given as a good plan to make fence posts last longer than they generally do. In the first place the timber should be cut in mid-winter, split, and allowed to season under cover. Now burn the lower end of the post so that it will have a coal showing from the lower end to six inches above the ground when set. Then saturate the burned part with hot coal tar. The posts are ready then to be set. If not wanted immediately let them stand under shelter with the black end down. It is claimed that posts fixed in this way will last twenty times as long as those of the same timber cut and set green and without being burned. The extra cost of fixing them will not be two cents a post.—Farming.

Hood Farm Jerseys
FOR SALE.—Large strong bull with some white markings. Dropped Aug. 20, 1897, by Brown Bessie's Son, the sire of 6 in the 14 lb. list. Dam, Bellona, 17 lbs. 4½ oz. by Borden, sire of 6 in the 12 lb. list. In the list including Costa Rica 21 lbs. 9½ oz. In 7 days, 90 lbs. 11½ oz. In 31 days, 140 lbs. 11½ oz. Write for price. HOOD FARM, Lowell, Mass.

Advantage of Underdraining the Soil.

In order to secure the largest possible crop yield that our soil is capable of giving us we should see that it contains a sufficiency of moisture for all plant requirements, but no stagnant or surplus water should be allowed to remain in the soil above a reasonable depth for the development of plant roots. Ordinary field and garden crops cannot grow and thrive in soil that is saturated or filled with water.

By drainage we mean the removal of the surplus water from the soil, either by natural or artificial means. A properly drained soil is one that is moist but not saturated with water. Loose, sandy, or gravelly soils, and those with an open or coarse subsoil, are said to be naturally drained. All heavier soils, and those lying in low places, require artificial means to remove their surplus water, and hence should be underdrained.

Soil is composed of exceedingly small particles of various shapes, which touch each other, leaving various sized small spaces between. By the law of physics, known as surface tension, each particle is covered by a film, or thin layer of water, which it holds to itself over its entire surface. The remaining space is filled with air. Where there is an excess of water the air is excluded—the water taking its place. This should not be, as a soil without air cannot sustain plant life. Where an outlet is provided all surplus water will pass off by gravitation, leaving only the amount held by the particles of the soil, which will not pass off as drainage, but remain to supply the needs of plant growth. The amount of moisture that can be held by the surface tension will depend upon the fineness of the soil particles—a fine clay soil will hold more than a coarse sand. The food which plants take through their roots must be in solution, and the water held by surface tension is sufficient for this purpose. All the water in excess of this is unnecessary and injurious, and should be removed by underdrainage.

Many otherwise excellent agricultural lands are unproductive or do not produce all that might be expected, because they contain too much water. Whether this excess of water comes directly from the rainfall or from soakage of adjoining lands, it must be removed by artificial drainage before such lands can be productive to their full capacity. Undoubtedly there are many soils that are not absolutely in need of underdrainage, but unless these are of a very open texture they would, nevertheless, benefit in many ways by being so treated.

The main advantage of underdraining lies, of course, in the removal of all surplus water that may find its way into the soil. Aside from this a great many advantages are derived from the fact that in removing the water it is first passed down through the soil. Rainwater, being of a higher temperature than the soil, thus imparts its warmth to the soil, which is no small consideration in hastening the germination of seeds and making all plant growth more rapid. In a well drained soil the frost comes out earlier in the spring, and the land dries up much more rapidly and is fit for cultivation much earlier, thus lengthening the season of growth, which is an important point in our northern climate. Undrained lands are often too wet for planting until the proper time for such planting is past. We can thus see that good drainage may in many cases make a difference of several weeks' time. In order that growth may proceed rapidly the soil must be warm. A wet soil is always cold, as its natural warmth goes towards evaporating the excessive water. In passing the water through the soil the surface is left entire; the fine, rich particles are not washed away as is the case where the water flows over the surface. Water in passing through the soil carries down with it, and incorporates more closely with the soil, any fertilizing material that may be deposited on its surface, thereby bringing it within easier reach of the roots. Rainwater in falling through the air carries down with it considerable of fertilizing material which the soil filters out and retains, leaving the water to flow clear. Water in percolating through the soil makes it more open and porous. This is especially advantageous in heavy clays, so that plants can penetrate to a greater depth and spread through a greater extent, thus providing themselves with better facilities for gathering food and moisture.

In periods of drought the danger of insufficient moisture is materially lessened as the power of the soil to absorb rain and dew is increased through better capillary movement, thus spreading through the soil what moisture may be available. If water is flowing through the drains from a better watered section it may be drawn out by capillary attraction where needed. This process of capillary attraction is well illustrated in the passage of oil through the wick of a lamp. We can see, too, that in periods of drought water may be drawn toward the surface from considerable depth. A soil that is usually water-

soaked, when it does dry out will bake and crack open, and dry out much more thoroughly; while a well underdrained soil can never bake, and under similar circumstances will always be found moist because, being porous, there is a continuous supply of moisture coming up from underneath to replace that which is being evaporated by the heat of the sun.

It is very interesting and often surprising to notice the increased crop yield derived from a field after it is well underdrained. In many cases the yield will be doubled, and the expense of underdraining more than repaid by the increase in the crop of a single season.

In conclusion I would say to those contemplating underdrainage, that it is of the utmost importance that the drains be well laid out and the whole of the work carefully and thoroughly done, for on this alone will depend the durability and future utility of the drainage. A man who has not himself had sufficient experience would do well to employ a careful and experienced workman to superintend the job, or else consult a good book on the subject.—Farming.



It is sad and disappointing for a father to rear a son who has not earned money for his education, work to insure him an advantageous start in life, and build castles in the air about the boy's future, only to have him killed off in the early years of manhood by the dread disease consumption.

Until recent years consumption was considered an incurable disease. Now it is known to tens of thousands that Doctor Pierce's Golden Medical Discovery cures 98 percent of all cases if taken in the early stages of the disease. It also cures bronchitis, laryngitis, throat and nasal troubles and all allied diseases of the air passages. It is the best blood-maker and flesh-builder, the best tonic and nerve restorative. It gives a keen edge to the appetite, corrects the impaired digestion, promotes the flow of digestive juices, facilitates the production of chyle in the lower stomach, or intestines, purifies the liver and purifies and enriches the blood. It tears down old and inert tissues and builds up new, firm, muscular tissues of health. It strengthens the heart's action, promotes the circulation of the blood to every part of the body and deepens the breathing, thus supplying the blood with vitalizing oxygen. Thousands have testified to its merits. The dealer who offers something else as "just as good" is dishonest.

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Daisy Bone Cutter, Power Mill, Wilson Bros., Easton, Pa.

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would be cheap, but I have some feed at six dollars per ton that is as nutritious as hay. Of course your cattle must have some hay, but you can feed much less hay, and make up the required weight or bulk with this feed. Sold in any quantity at 30 cents per 100 lbs., delivered at depot in Boston, the bags are ten cents each, returnable at same price, or you can send your own bags if you prefer. Will send you a trial lot of 300 lbs. on receipt of one dollar, which will give a chance to see it and try it on your stock. I have a few small ears of 12 tons each for \$50, you to pay freight from Boston. These would not be quite as uniform in quality as those advertised above at six dollars per ton. I will refund \$10 for the bags if returned within 30 days, which will make the cost of 12 tons only \$40. Terms, cash with order. Better be quick and order a car of it. C. A. PARSON, 154 Commercial Street, Boston, Mass.

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This book gives the result of 27 years' experiment work on the Rural Grounds. How to increase the crop without corresponding cost of Production. Manures and Fertilizers. The Soil. Depth of Planting. Seed Culture. The Rural Trench System. Varieties, etc. It is respectfully submitted that these experiments at the Rural Grounds have, directly and indirectly, thrown more light upon the various problems involved in successful potato culture than any other experiments which have been carried on in America. Price, cloth, 75 cents; paper, 50 cents; prepaid.

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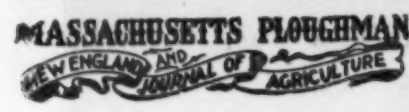
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BOSTON, APRIL 23, 1898.

Persons desiring a change in the address of their paper must state where the paper has been sent as well as the new direction.

What the country districts most need is solid, educated business men with farm training.

SOME men expect to ride a hobby to success, but they will fail, unless there is a good deal of a man behind the hobby.

No man can be healthy with too little exercise or too much, but reasonable moderate labor is best for body, mind and morals.

Put your money in a safe place where rats will have small chance to get at it. A wise hen lays her eggs in a thicket of nettles.

THE most numerous pension list in America is that of the rats and mice on the farm. Cross them off the list and get the cat to investigate.

New ideas always seem queer at first sight, and the temptation is to howl down; but wise second thought suspends judgment and experiments a little in a quiet way.

This is the time of year when a great many farmers will make the worst possible investment by spending their money for low-grade nursery stock and poor seeds.

DON'T waste good, rich land growing a scrubby, straggly hedge. Wire is much better, cheaper and more compact. Fences are out of date anyway, except where they are actually needed.

DON'T send the boys away to get a farm when a half or a third of the home place would do just as well. Perhaps a silo and better stock will make half the farm produce as much as the whole did before.

ALMOST anywhere it is possible to find a farmer who says he knows all he wants to know, but his farm tells a different story. Men who make big statements should take care that the crop, the stock, or buildings do not give them the lie.

UPON the average farm there is work enough done and crops enough raised to make the owner prosperous, but too much of the work is useless and blundering, and too many of the products are wasted or sold to poor advantage. That is where the profits go.

THE project to reclaim waste land by the use of convict labor has gained considerable favor in Massachusetts and the bill looking toward the result is now in well on its way toward the legislature. It is an excellent idea to put waste labor at work reclaiming waste land.

A YOUNG man, formerly of Eastern Massachusetts, has bought an abandoned farm in the western part of the state for only \$150. There are five acres, good buildings, a fine spring of water and the farm is near the railroad station. This young man thinks he has a bargain. Such a farm would make a good plan for poultry.

DESPITE all the talk about no danger of overproduction of eggs, the price during the spring months gets lower and lower every year, and the number of eggs exported continually increase until now more eggs are sent away than are imported. The time is evidently coming when a good share of the egg product if sold at all, must be exported at very low prices.

A MAJORITY of young men who go to the city do not go to ruin, neither do they make fortunes. The most numerous class are those who jog along making poor to moderate pay and spending about all they earn. This class, in most cases, would have been better off to have stayed in the country, where the outlook for a healthy old age, with a competence would have been much more favorable.

THE reports of the Canadian agricultural experts who have been investigating the agricultural prospects of the Klondike region indicate that the season is too short for almost all crops, but grass and some fodder crops can be grown, also turnips and radishes. The temperature goes down to freezing nearly every day in the year, but the days in summer are very long and growth is rapid.

A "BAD LUCK fund" is a comfort to the fore-sighted farmer. He knows that he is bound to have about as much bad luck on the average every year. Tools break, animals die, accidents happen, and he sets aside a fixed sum every year and hopes these losses will be made good, and when the ill fortune comes he has made provision for it, and never feels discouraged but simply draws from the bad luck fund and replaces the loss.

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We offer One Hundred Dollars reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.
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WALDING, KINMAN & MARVIN, Wholesale Druggists, Toledo, O.
Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.

CURRENT TOPICS.

The Cuban question has occupied the entire attention of Congress the past week, and the excitement has been intense. In the House, a resolution favoring armed intervention but not the recognition of Cuba was passed by a large majority, after a very disorderly discussion. The Senate resolution was still more radical, and not only authorized armed intervention but declared Cuba free and recognized the existing Cuban government, in spite of the recommendations of the President and many of the representative men in the Senate. The debate was a general one and notable speeches were delivered by the two Massachusetts senators, Senators Hoar and Lodge, supporting the President's position. The resolution was passed by a good majority. Then came the attempt to effect a compromise between the two branches of Congress. The Senate resolution was sent to the House, but the latter body through the strenuous efforts of Speaker Reed and other leaders in the House, refused to pass it in its entirety, rejecting the recognition section and changing the wording somewhat of the section relating to the freedom of Cuba so as to make it less explicit. When returned to the Senate for approval, that body refused to accept any revision of the resolution but was prevailed upon to appoint a conference committee, which finally reported a resolution which proved sufficiently acceptable to both branches as to receive a majority of their votes. As it now stands, the resolution is as follows:—

1.—That the people of the island of Cuba are and of right ought to be, free and independent.
2.—That it is the duty of the United States to demand and the government of the United States does hereby demand that the government of Spain at once relinquish its authority and government in the island of Cuba and withdraw its land and naval forces from Cuba and Cuban waters.
3.—That the President of the United States be, and he hereby is, directed and empowered to use the entire land and naval forces of the United States and to call into the actual service of the United States the militia of the several States, to such an extent as may be necessary to carry these resolutions into effect.
4.—That the United States hereby disclaims any disposition or intention to exercise sovereignty, jurisdiction or control over said island except for the pacification thereof, and asserts its determination that when that is accomplished, to leave the government and control of the island to its people.

The Cuban resolutions passed by Congress early Tuesday morning were then sent to the President for his signature which was delayed until an ultimatum could be prepared to send to Spain. These two documents received the President's signature Wednesday morning, the ultimatum, however, not being given to the public until Thursday. The Spanish minister, Senor Polo, immediately applied for his passports, and although at this writing no answer has been received from Spain, it is believed that she will refuse to comply with the demand in the ultimatum, and preparations have been made for the immediate despatch of squadrons to Cuba and Porto Rico in the event of her refusal. Spain has been given until Saturday noon to return an answer to the ultimatum.

While Congress has been debating over the attitude this country shall assume on the Cuban question, preparations for defense and for war, if necessary, have been rapidly pushed forward. It has been announced that the St. Paul and her sister ship of the American Line, both fast ships, are to be taken by the government for auxiliary cruisers. An order for the mobilization of the regular army at points on the southern coast most available has been sent out from the War Department, and they will assemble at Chickamauga, New Orleans, Mobile and Tampa. General Miles will be in command, with headquarters at Atlanta. It is also said that the President will call for 50,000 volunteers from the militia. The attitude of the European Powers will probably be a neutral one in the event of war between Spain and the United States. They have nearly abandoned all hope of mediation and Great Britain has shown herself very friendly to this country, steadily refusing to join in any demonstration or movement to intimidate or embarrass the United States in any way.

Beacon Hill Notes.

A bill has been reported providing that the work of the Massachusetts cattle commission shall be done as far as possible through local inspection; that is, doing away with the general testing of herds for detecting tuberculosis. Full compensation is declared with a maximum limit of \$60 per head.

The bill to require milk cans to be kept clean and free from foreign substances has been referred to the next general court.

The governor has signed the bill for the use of electricity in execution of the death penalty.

A message was received from the governor Friday of last week asking for \$500,000 to defray military and naval expenses in the present emergency. The Legislature responded by the immediate enactment of a bill appropriating the amount named out of the tax levy. In case war actually breaks out, it is understood that a loan of \$2,000,000 more will be authorized.

No man need ever worry for fear he will have no chance to show his ability. The common trouble is that when the chance comes the man has not acquired ability to use it as it should be used.

Literary Notes.

Those who have read and enjoyed "The Silence of Dean Maitland" by Maxwell Gray, will be interested to read another book from the same pen just issued and bearing the attractive name of **KNOWLEDGE PIPER**. It is an English story, of course, very simple in plot and abounding in the country dialect, which may prove something of a stumbling block to some American readers, but does much to create the "atmosphere" for the story. The chief charm of the little tale is the perfect simplicity with which it is told, so that without the least straining for effect, a clear picture is given of English rural life. The story is set in the beautiful winding country roads, with their flowered banks, the musical jingling of the wagon bells, chiming out an accompaniment to the merry songs which almost sing themselves, so full of swing and rhythm are they, all blended into one perfect whole. The reading of it brings to one a breath of free country life, just as the fruit of the apple from which the story takes its name carries with it the thought of all the joy and freedom of a happy life, lived near to nature. The little thread of a love story running through it, with the happy ending of merry marriage bells, gives the human interest without which no picture is complete. Harper Bros. New York, Publishers.

VICTOR SERENUS, a story of the Pauline era by Henry Wood, author of "Studies in the Thought World," "Ideal Suggestion," "God's Image in Man," "Edward Burton," "The Political Economy of Natural Law," etc. 12mo. Cloth.

Messrs. Lee and Shepard, Boston, have now in press a most interesting piece of fiction by Henry Wood, entitled "Victor Serenus." The scene is located in that very dramatic period of the world's history, the Pauline era, and through graphic character delineation deals with the thought, customs, and religious systems of that time. Its aim is to draw a true and well-proportioned picture of the actual conditions, avoiding an overdrawn and debasing realism, so often employed for the sake of exaggerated contrasts.

With unimportant exceptions, Paul is the only historic character, and those who have been privileged to read the advance sheets are of the opinion that the various dramatic and psychological situations which are depicted during his unique development are remarkable. Victor Serenus, and the other leading personalities that are employed, are representative creations.

While the historic framework is carefully preserved, there is a wide range of the fancy and imagination in the movement, and a wealth of mystical, physical and weird phenomena deftly woven into the fabric of the story. Love, adventure, romance, idealism, and magic are handled in action to combine entertainment, instruction and profit. Mr. Wood's former books, which have passed through many editions, have been mainly philosophical, ethical, and metaphysical, (one of which, "Ideal Suggestion," has been translated into Chinese, and had a wide circulation in that empire), but in the present work the graces of the imagination stand out with great power in plot, action, style and purpose.

The book is a closely printed volume of five hundred pages, and good judges predict for it a large circulation and popularity. [Price \$1.50.] Lee & Shepard, Boston, Publishers.

Reducing the Cost.

The most expensive and most important element in fertilizers is nitrogen, and whatever tends to reduce the cost is a benefit to the agricultural community. Nitrogen is obtained from several sources, nitrate of soda and sulphate of ammonia being largely used for this purpose. Nitrate of soda comes chiefly from Chili, and being controlled by a monopoly, they regulate the price and supply to suit themselves.

Sulphate of ammonia, its chief commercial rival, is one of the best sources of nitrogen to be had and contains an even larger proportion of nitrogen than nitrate of soda. It is now to a large extent imported, but the establishment of coke works in this country will very much reduce the price. Sulphate of ammonia is one of the by-products in the manufacture of coke, there being about twenty-five pounds of sulphate of ammonia in every ton of bituminous coal burned to make coke. The establishment of coke works at Jamestown, Pa., not long ago, very much increased the supply and consequently reduced the price, and the coke works of New England Gas and Coke Co., which are now being built at Everett in this state, will increase this source of nitrogen supply, reduce the cost and thus bring the liberal use of fertilizers and consequent cheap production of large crops within the reach of all farmers.

Dr. Goessman, director of the chemical department of the Massachusetts Agricultural College, and an authority in agricultural chemistry, says of the new industry to be established in this country:—

"I cannot speak too strongly in favor of any movement to benefit so large a proportion of our people by cheapening the cost of our nitrogen sources. Think of the great benefit it would be if we had right close at hand, independent of foreign conditions or foreign demand, a source of supply of sulphate of ammonia. There would be an immediate and profitable market for this important by-product and its increased production resulting, as I have said, in increased consumption would also benefit the farmers so that the coke works and the farmers would work hand in hand."

This subject is worthy the attention of our readers, and we recommend to the consideration of the farmers of New England the statements and deductions of so eminent an authority as Dr. Goessman and suggest a careful perusal of the article printed elsewhere in this issue of the PLOUGHMAN.

Liver Ills

Like biliousness, dyspepsia, headache, constipation, sour stomach, indigestion are promptly cured by Hood's Pills. They do their work easily and thoroughly.

Best after dinner pills.
25 cents. All druggists.
Prepared by C. I. Hood & Co., Lowell, Mass.
The only Pill to take with Hood's Sarsaparilla.

CHEAP FERTILIZERS.

They are Likely to be an Early Reality
—Prof. Goessman on Sulphate of Ammonia—Valuable By-Product of N. E. Gas and Coke Ovens at Everett.

"Every farmer, every person having a garden, a lawn, a flower bed or even potted plants would be benefited by the completion of the coke works, now building at Everett," said Prof. Charles A. Goessman, Ph. D.

Dr. Goessman is one of the standard authorities on agricultural chemistry, particularly that relating to the plant foods and commercial fertilizers, in the country. He graduated from the Goettingen University in Germany, receiving his first degree of Doctor of Philosophy the second coming from Amherst College. He came to the Massachusetts Agricultural College at Amherst soon after it was started and was for 12 years director of the Massachusetts Experiment Station, until it was united with the Hatch Experiment Station, when he became director of the chemical department of the college and station. He is now State Inspector of Fertilizers, and stands at the head of his profession after 40 years' active experience.

"In what way would this be accomplished, doctor?" asked a Journal reporter, who interviewed him recently at Amherst.

"By the increased production of sulphate of ammonia, the most important basis of chemical fertilizers, which increased production would mean a reduction in the price with a consequent great increase in consumption."

"Why is sulphate of ammonia so important?"

"On account of the large amount of nitrogen it contains, wherever it is used, it adds to the soil, its chief commercial rival contains only 16 per cent. As you may know, nitrogen is the chief basis of all plant foods, whether natural or manufactured, and the more we can produce of it and the lower the price the greater the benefit to everybody concerned."

"Are chemical fertilizers more like any other commodity in that their supply and demand regulates the price. Take, for example, sulphate of ammonia which fluctuates constantly, more so than nitrate of soda. Last year when the coke works at Johnston, Pa., were erected and the supply of sulphate of ammonia became full, the price fell and the demand increased. It is for this reason it is important that our sources of supply of nitrogen, the chief basis of chemical fertilizers, should be increased."

"Nitrate of soda comes chiefly from Chili, where it is under the control of a monopoly which regulates and maintains the supply and the price. Nitrogen sources are like any other commodity in that their supply and demand regulates the price. Take, for example, sulphate of ammonia which fluctuates constantly, more so than nitrate of soda. Last year when the coke works at Johnston, Pa., were erected and the supply of sulphate of ammonia became full, the price fell and the demand increased. It is for this reason it is important that our sources of supply of nitrogen, the chief basis of chemical fertilizers, should be increased."

It may be said in passing, from figures obtained by the Journal man at Amherst, that from 1882 to 1894, twelve years, sulphate of ammonia ranged in price from \$30 a ton; the lowest was about \$20. Last year it fell, but has gone up to about \$30. It may be interesting to quote from the Oil, Paint and Drug Journal of New York, a standard on such matters, the average wholesale price of sulphate of ammonia for the past six months, which were as follows:

Top price for Sept., 1897.....\$42.38 to \$43.50
Top price for Oct., 1897.....42.80 to 44.00
Top price for Nov., 1897.....42.74 to 44.00
Top price for Dec., 1897.....42.60 to 44.00
Top price for Jan., 1898.....42.60 to 44.00
Top price for Feb., 1898.....42.60 to 44.00
Top price for March to date.....42.60 to 44.00

The average price by fertilizer dealers in large quantities to farmers during the same time has ranged from \$32 to \$30. This year the price is from \$30 to \$28, whereas six months ago it was down to \$25.

Meanwhile, nitrate of soda has averaged at wholesale from \$33 to \$34 a ton and by dealers \$39 to \$40.

Dr. Goessman said: "Blood and animal matter always contain a large amount of nitrogen, but we can get more and in a concentrated form from sulphate of ammonia. Sulphate of ammonia is equal to the best nitrogen sources we have. At present it is chiefly imported, and because it is so largely used in Europe and England, the supply is limited, but if produced in gas houses or coke works, such as those now building by the New England Gas and Coke Company, it will be produced in large quantities, and the price will be reduced. It is absolutely indispensable, and its use will result in increased production, resulting in increased productivity, improving the soil. We consume more chemical fertilizers in New England than the Western States, and the chief reason for this is the New York State and the Atlantic States, in the neighborhood of Philadelphia, Baltimore, New York and Boston."

"Today nitrogen, although more important than potash or phosphorus, is the most expensive and the costliest component of chemical fertilizers. It is absolutely indispensable, and its use will result in increased production, resulting in increased productivity, improving the soil. We consume more chemical fertilizers in New England than the Western States, and the chief reason for this is the New York State and the Atlantic States, in the neighborhood of Philadelphia, Baltimore, New York and Boston."

The use of sulphate of ammonia, whether in connection with manure, or from the distillation of animal matter it may be reasonable in price, leading to increased consumption, resulting in increased productivity, improving the soil. We consume more chemical fertilizers in New England than the Western States, and the chief reason for this is the New York State and the Atlantic States, in the neighborhood of Philadelphia, Baltimore, New York and Boston."

"I cannot speak too strongly in favor of any movement to benefit so large a proportion of our people by cheapening the cost of our nitrogen sources. Think of the great benefit it would be if we had right close at hand, independent of foreign conditions or foreign demand, a source of supply of sulphate of ammonia. There would be an immediate and profitable market for this important by-product and its increased production resulting, as I have said, in increased consumption would also benefit the farmers so that the coke works and the farmers would work hand in hand."

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organic matter in the soil, or a crop like clover may be raised and then ploughed in, but all these methods while most valuable, for organic matter is often necessary and indispensable to the soil, have their defects from the fact that they may be deficient in one or another chemical element, and for this reason even when concentrated fertilizers are not used alone the chemical fertilizers may be used to reinforce organic fertilizers, and in this way the highest results may be accomplished. The great objection to organic fertilizers of any form is the time consumed in getting them into serviceable condition during which the land is not valuable. This is avoided by the use of chemical fertilizers.

"The United States Government recognized the importance of the work of studying fertilizers, and their most effective use in its agricultural college grant under the Morrill act in 1867, and again in the Hatch bill in the 80's, establishing experiment stations in every State and Territory, so that today a great work has been done in the scientific study and demonstration of chemical fertilizers. The next step to be taken should be that of scientific utilization of waste matter and, by the utilization of these by-products, the cheapening of fertilizers so that farmers, gardeners, people with lawns and lawns, everybody interested, may benefit by the scientific knowledge obtained at experiment stations, through the ability to use fertilizers which will follow the cheapening of their cost."

Dr. Goessman is anxiously awaiting news from Eastern Massachusetts regarding the New England Gas and Coke Company's works, and feels that his interest should be shared by every person interested in the welfare of Massachusetts or in the agricultural interests of the country, and he is strong in his expressions of hope that the works may be speedily completed.

Washington News.

"Grain Smuts" is the title of a bulletin just issued by the Department of Agriculture (Farmers' Bulletin No. 75), which will be of interest to the farmers of a wide area of the country. The bulletin covers twenty pages and treats exhaustively of the smuts affecting various grains, of how they are caused and how to prevent them. Send for a copy to the Secretary of Agriculture. To the ordinary observer it does not seem probable that the black, dusty mass which fills the kernels of wheat and attacks the whole head of oats and which is known as "smut," is in reality a mass of minute and definitely organized plants, or rather the seeds of plants. This smut is blown about by the wind and frequently carried from field to field on threshing machines, thus spreading the "disease." The great danger accomplished by the smuts have attracted the attention of agriculturists even as far back as the days of ancient Greece and Rome. If left unchecked these smuts increase from year to year until a large percent of the crop is destroyed. The methods of treatment described in the bulletin mentioned will enable every progressive farmer to entirely prevent the trouble.

NEW HORSE DISEASE.

The Maryland Experiment Station, at College Station, near Washington, District of Columbia, has just issued a bulletin (No. 53) concerning the so-called "new horse disease" in Maryland. It is shown, however by the joint investigations of the State Veterinarian and the Veterinarian of the Station that the disease is the same as that described by Prof. Large of Brooklyn, under the name of "cerebro-spinal meningitis," and appearing in the "Diseases of the Horse." The bulletin fully describes the symptoms and effect of the disease, which is a most serious one, and prescribed methods of treatment.

FOR STEEL WAGON ROADS.

General Stone, Chief of the Good Roads Division of the Department of Agriculture, has in behalf of the Department, made arrangements with the Cambria Iron Company for rolling special rails for more extended experiment in the use of steel trackways on wagon roads. General Stone and the engineers of the Iron company have after much discussion agreed upon a plan which promises to meet the requirements. No wood is used in construction and no cross ties for support. The track consists of a simple inverted trough or channel for each wheel, with a slightly raised bead on the inside to guide the wheel, each channel resting on a bed of gravel and the two tied together occasionally to prevent spreading. The experiment promises a step forward in the matter of improved roads, and the ability to readily market heavy loads at a minimum expense in power.

ADDITIONAL GARDEN TALK.

Some mention was made in a recent letter on the importance and value of a good garden on the farm and the desirability of a large garden with long rows, adapted to horse cultivation, as against the "hand garden." The advantage of a garden so planned as to allow the bulk of the cultivation by horse power is unquestioned. With a good adjustable cultivator or horse hoe, the superior strength of the horse will suffice to do in a minute what a man can accomplish no better in fifteen minutes. In any event, even with most thorough and satisfactory horse cultivation, there is always sufficient hand work to satisfy the most industrious. But such a plan of operation applies only to the farm, where there is comparatively plenty of land which can be set aside for the garden.

But the small garden is necessary in many instances. One of the best features of America and American living among the great middle class, and a feature in marked contrast with the condition among the middle class of European countries, is the ability of thousands of workmen and small business men to own little pieces of land upon which they can grow many of the supplies for their tables. To such a class of citizens, the "hand garden" of course is the practicable one. Their ground supply is limited and their aim must be to get the ground as rich as possible and then grow the greatest amount of growth into it, compensating for additional space by extra care and attention and additional cultivation.

In the preparation, laying out and planting of such a garden, head work will count for as much or for more than in the farm garden. It will take several years to get the garden into the finest growing

\$50.00 RANGES FOR \$25.00

TO INTRODUCE OUR

TRIUMPH STEEL RANGE into every section of the United States. We will for a short time deliver at your door a free of charge our highest grade steel range for \$25.00. The regular price is \$50.00. It has 6 inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/2 inches deep, and 16 gallon reservoir. Weight 40 lbs. Burns wood or coal. Write for descriptive pamphlet. Best Range made. WM. G. WILKARD, Manufacturer, 113 & 115 N. Second St., St. Louis, Mo.

OSBORNE FARM IMPLEMENTS
The largest complete line of farm machinery manufactured by any single concern in the world; embraces:
TRADE MARK Osborne All-Steel Self-Dumping Rakes, Hand Dump Rakes, Columbia Inclined Oar Harrowers and Blenders, All-Steel Treaders, Columbia Grain Harrowers and Blenders, Horse Hoe Cultivators, Columbia Reapers, No. 2 Reapers, Columbia Mowers, 1 & 2-Horse, Flexible and Reversible Disc Harrows, Combination Harrows, Adjustable Peg-Tooth Harrows, Spring-Tooth Harrows, etc. Every machine fully guaranteed and is the best of its class that can be produced with good material, complete equipment, superior workmanship, and long experience.
The Cut here shown is that of our Osborne All-Steel Self-Dumping Hay Rake.
It's all steel except the shafts. Mounted on our all-steel double hub bicycle wheels. Full tempered high-carbon steel teeth, each with a coil spring, all set at exactly the same angle. New floating tooth device keeps hay from rolling or raking. Teeth can be set wide or narrow at will. Every spring adjustable, self-dumping. Osborne Hand Dump Rakes possess all the desirable qualities of our other rakes, is made of the same high-grade quality of material, and is dumped by hand. It is easily the best hand dump rake on the market. See our local agent BEFORE you buy. Handy book on Farm and Home Fertilizers. D. M. OSBORNE & CO., AUBURN, N. Y.

Give your Sheep a Gymnasium
Save Yourself Unnecessary Work
Stop the Leak in Your Pocketbook
BY USING AN
IMPROVED UNITED STATES SEPARATOR
AND
FIRST PRIZE DOG OR SHEEP POWER
I Stopped the Leak.
MORGANTOWN, PA., Jan. 31, 1898.
The Improved U. S. Separator and First Prize Dog Power that I bought of you are doing good work and saving me a great deal of money. The sheep learned quickly and now I am making 1 lb. of butter more from every 10 lbs. of milk than I was paid for at the Creamery, and am getting a cent to a cent and a half more for my milk than I was getting before. So you see there was a small daily leak in my pocket, and in one month it was a pretty big one. S. H. MAST.
SHEEP GAINED IN FLESH.
CONWAY, MASS., April 23, 1898.
The No. 1 Improved U. S. Separator is doing all that we can ask of it, and we are very much pleased with it. It tests on an average of 1 percent, which we think is close enough for any separator to claim.
It was reported when we first began to run it that the sheep had to work too hard and would not stand it long, but he is not quite dead yet. After running it one month, he had gained 10 lbs. and was in better condition than he was when he first came. J. C. NEWHALL & SON.
Send for circulars, containing hundreds of testimonials, telling of the gratifying results obtained by the use of the Improved U. S. Separator.
VERMONT FARM MACHINE CO., Bellows Falls, Vt.

condition. The best results cannot be expected the first year. Let us see what can be done with a half acre of moderately good ground, a lot, say 100x200 feet. Suppose it situated the narrow way north and south, that is, with the hundred feet sides facing north and south.

An excellent plan to commence with is to plant an evergreen hedge, say a Norway Spruce, along the north face and down the west side thirty or forty feet. This will cost a little something but when it is a few years old it will prove a most valuable wind break and a splendid place behind which to grow some early things or have a hot bed. Next to this hedge a row of dwarf fruit trees, say pears, would do well. Between these trees plant rhubarb. An objection made to hedges, by the way is that their roots run out into the garden and take the moisture and nourishment needed for other growths. Obviate this by cutting a ditch a couple of feet inside the hedge, cutting the roots and forcing the hedge to sustain itself from the other side. The dirt can be replaced again as fast as cut. This will not hurt the hedge. Next to the trees make an asparagus bed. As ground is limited, this better be planted in the old way as a bed making it about three and one-half feet in width so that the center can be reached from either side. For the planting of asparagus, the ground should be especially prepared and made very rich. The preparation of this bed will be a somewhat laborious task and there will be no yield the first year, but thereafter it will be one of the earliest spring vegetables and a product of great medicinal value. The abundant use of asparagus is a cure or at least an almost certain preventive against kidney disease. Year after year, with the bed kept in good condition it will yield its early spring contribution to the table. Each fall a top dressing of a couple of inches of rotted manure or mould, free from weed seeds, should be spread upon the bed and in the spring the stalks will push up their sturdy heads, tender and succulent. But little less important as a spring medicine is rhubarb mentioned above. After it has served its purpose as a spring vegetable, let it grow up; then in the fall, break it down again (do not cut it) and can the stalks. At that season the system does not crave acid, as fruits are plenty, but in the winter it will be found a wholesome and gratefully received addition to the table.

Next to the asparagus plant strawberries. There are several methods of planting and cultivating which will bring good results. They may be planted in beds with three rows in the bed and the plants a foot apart in the row. This plan, when they begin to run, will make the bed practically solid. If the gardener is likely to have considerable time to "tend" the garden, a very satisfactory method is to plant in hills. Plant in rows just far enough apart to be able to straddle easily, say two feet and set a foot apart in the

rows. Let the plant grow to about six or eight inches in diameter and keep the runners cut back beyond this. This method will be found to more nearly cover the ground than is at first supposed and both the yield of berries and their size will be very large. A three year rotation will give the best results. Plant, for instance, in August or early September after a good rain. The plants will get a good start and will bear half a crop the first spring. The next September plant another plot. The second spring the first planting will bear a full crop and the second planting a half crop. Then spade under the first planting, which has borne a crop and a half and plant another bed. This will keep the berries up to their highest standard of yield and excellence and be found very satisfactory. Some discretion should be observed in planting early and late varieties, giving a good succession. Two hundred plants, or two rows the width of the garden will be sufficient to supply an ordinary family.

Thus far we have utilized about thirty feet of the length of our garden. Now a good plan is to run a broad walk the entire width, cutting it into two sections, and to plant on either side grapevines, making a trellis for them to run upon or tying them to stakes.
In the remaining section of the garden let the rows run the long way. On either side, if desired, a row of fruit trees can be planted, pears, peaches and apples, with a quince or two in some specially rich spot. Next to these should be rows of berries; black and raspberries, currants and gooseberries. These should be cultivated at least once in the spring with a horse cultivator. The rest of the ground is for annual vegetables and is supposed of course to be plowed and put in the best possible condition in the spring by horse power.
If the dimensions of this garden are exactly in half, enough still can be raised with proper attention to go far toward supplying a good-sized family with fresh vegetables throughout the spring, summer and fall months.
GUY E. MITCHELL.

MORE April farmers are needed. A man who never gets started out doors until the first of May, will be chased by his work the season through. Farmer Slack has tried it and he knows.

HIGH GRADE

200-ACRE stock and grass farm to close out estate; 45 miles out, in one of the most thriving towns in the state, 1 mile to depot on two lines of R. R. 1 1/2 miles to churches and schools, fine summer residence or location for practical farmer; land rolling and well divided, cutting by machine out 75 tons of hay; excellent fruit of 16 rooms, fine cellar, large lawn and plenty of fine elms; 2 barns 40x60, cellars under both; cupola on house and barn; heavy carriage, corn and clover house; cottage house of 6 rooms; all in good repair, well insured, well supplied with water for all purposes, low taxes, large apple orchard, also plenty of pears and plums; has not changed hands for 37 years; good stock of manure; all barns, machinery wagons, carts, sleds, sleighs, tools, harnesses; also part of furniture for particulars and photograph apply to F. E. BELCHER, executor 211 Tremont St., Boston.

THE HOUSEHOLD.

BUGS IN A BASKET.

Three little bugs in a basket,
And hardly room for two!
And one was yellow and one was black
And one like me or you.
The space was small, no doubt, for all,
But what should three bugs do?
Three little bugs in a basket,
And hardly room for two;
The space was small, no doubt, for all,
But what should three bugs do?
The space was small, no doubt, for all,
But what should three bugs do?
The space was small, no doubt, for all,
But what should three bugs do?

Three little bugs in a basket,
And the beds but two would hold;
So they all three fell to quarrelling—
The white and the black and the gold.
And two of the bugs got under the rug,
And one was out in the cold.

So he that was left in the basket,
Without a crumb to chew,
Or a thread to wrap himself withal
When the wind came across him blew,
Pulled one of the rugs from one of the bugs,
And so the quarrel grew.

And so there was war in the basket—
Oh, 'twas 'tis 'tis true!
But he that was frozen and starved at last
A strength from his weakness drew,
And pulled the rug from both of the bugs
And killed and ate them, too.

Now, when bugs live in a basket,
Though more than it will hold,
It seems to me they had better agree—
The white, the black and the gold—
And share what comes of the beds and crumbs
And leave no bug in the cold.

THE TRUE STORY OF A SAUCE.

This is a true story of low life and also of a great sauce. What his real name was no one ever knew. He had come into Rivington street in the arms of a drunken woman who inexplicably had considerable money. On this account, and also on account of her generosity, she was welcomed by the society of that downtown district.

Her name was Mary. Her family name was somewhat obscure. Once when arrested she gave it as Jones, another time as Schmidt, a third as Bonaparte and a fourth time as Washington. This variety showed her to be a woman of some information, if nothing else.

The baby was a bright-eyed little thing which was lame. The woman was kind enough to it in her own rough way and left the child largely to its own resources.

It was clever and soon found out which of the neighbors were kind and liked children and which did not. Jamsey, for so it was called by its mother, managed to get along like thousands of others in the submerged tenth. He grew, but on account of his infirmity grew in a different way from the other children of the neighborhood. He did not care much for playing, but liked housekeeping, dolls and other girlish recreations. When he was four he could make himself quite useful in the kitchen and was so careful that he could be safely intrusted with plates and tumblers.

When he was six his mother died. No one ever appeared to claim the body and the city buried it without ado. The kind-hearted policeman talked of taking the boy to a nice orphan asylum, where the children are all dressed in uniform and are trained to walk alike, talk alike, eat alike, read alike and think alike and very often to misbehave and die alike.

He found to his surprise that even down in Rivington street there was an invincible antipathy to asylums. Mrs. Mueller, a childless German woman, said that the baby should stay with her as long as she lived and that no Irish policeman should take it away and have it ruined in an asylum. So Jamsey became a member of the Mueller family, which consisted of the lady in question and her husband, who was employed in an uptown brewery.

Mrs. Mueller, like all German housewives, had a mania for cleanliness. In her particular religion it preceded godliness. She had the same reverence for a scrubbing brush that a poor Hindu has for Juggernaut, while a bar of soap gave her more pleasure than the heaviest black silk dress.

Undoubtedly the cornerstone of her love for Jamsey was his taste for household pleasures, and they made a fine pair.

Although lame, he would lend a fair hand for scrubbing up the floors and polishing the windows and doing the family ironing. He was invaluable in washing and wiping the dishes, and by degrees he came to cook all her favorite dishes as well as she herself did.

Once or twice she let him cook by himself, when he surprised her by the tastiness of his finished work. After that, when she had what she considered leisure, she would teach him all the secrets of old German country cooking as she had learned it in her youth, of fashionable Berlin cooking where she had been a cook some eight years before marrying and coming to this country.

Jamsey made wonderful progress and at thirteen, as Mrs. Mueller fondly admitted, was almost as good, if not very much better, than herself. The old lady had not neglected Jamsey's education. He had gone to the public school and had made fair progress. He had learned German from Mrs. Mueller and her husband and picked up a capital smattering of French from Monsieur Bonhomme, the poor little cobbler in the basement of the tenement.

About this time Jamsey heard of the cooking school. It was conducted by some charitable ladies who lived uptown and was held one evening a week.

He obtained Mrs. Mueller's consent and applied for admission. He was a pretty boy; although poor, was as clean and neat as if he had been a millionaire's son. Although older than the other children, he was admitted to the class.

Before the first lesson was over the teacher found in an amazement that many respects the boy knew more of cooking than she did. After three months had passed, she said to him one day:

"Jamsey, you had better go to a higher school."

Jamsey knew of none.

"Didn't his friends know?"

Jamsey had no friend.

The teacher thought herself and gave him a letter to an eminent teacher of cookery uptown. He was very well received when he presented the letter, but he was broken-hearted when told

that the instruction cost twenty-five dollars a quarter.

Jamsey had never had more than a few cents in all his life. He mused a little while and then he said: "Please, ma'am, I want to learn cooking with you, and I haven't got any money. But if you'll teach me what you know I'll teach you what I know, and I'll wash your dishes and clean your kitchen besides, in the bargain."

The professor of culinary art laughed very heartily, and being a good natured soul took Jamsey in upon these terms. One day a pupil desired to learn how to make two or three German dishes. Her husband expected to entertain some friends from Berlin and wished to surprise them. The professor was at a loss to answer, being, as a matter of fact, utterly unfamiliar with Teutonic cooking. Jamsey, seeing the dilemma, whispered to the teacher:

"I know how. You let me teach her."

The professor said: "Thanks, Jamsey," and told the pupil that her assistant had made a specialty of German cooking and would be only too glad to give her the requisite tuition.

The lady accepted and Jamsey was unexpectably happy. He gave three lessons and did it so well that both professor and pupil were deeply pleased. Better still, the pupil, who was very well to do, gave the little cripple a five dollar bill. He thanked her, chuckled, and then went home as fast as his lameness would permit. When he burst into the room where Mrs. Mueller was scrubbing the underside of the table, and handed that astonished woman a clean, crisp bill, she could not find words to express her feelings.

She went to a closet, unlocked and opened an ancient trunk and took from it a Dutch cap, black velvet, with a band in which red, yellow, blue, orange, green and violet were massed in crazy style, and put it on the boy's head.

She said: "My boy, you have earned your first money and you are now a man. You shall wear a man's hat. That hat is what my husband wore when he got out of his apprenticeship and became a brewery man, free and independent himself."

The professor was very well pleased with Jamsey's tact and gave the boy a very thorough training. Two years he remained there, at the end of which time, the professor said that Jamsey had mastered his profession. Jamsey was very to hear the news, because he was ambitious to learn everything there was in regard to the kitchen.

He had made a little money during the time, and he had bought cookery books under his teacher's advice. The latter had also presented the boy with foreign books, especially those in French and German, which were unknown tongues to her, but not to Jamsey.

He had also secured a number of implements and had refashioned many to suit his own ideas. He was going on fifteen and, though small for his age, he had already the soul of a man. About that time Mr. Mueller was taken sick.

Ere long the sickness ended and Mrs. Mueller was a widow. What money there had been put by had been largely consumed during Mr. Mueller's sickness, and his insurance was very small.

At the furthest there was but twelve hundred dollars, and out of this came the expenses of the funeral and the cemetery. In Rivington street they followed the ancient Irish practice of robbing the living to honor the dead. There was a fine hearse and many carriages, a coffin, which the neighbors called "perfectly elegant," a lot and a handsome tombstone.

There were the usual funeral festivities, and when this was over about seven hundred dollars remained. Mrs. Mueller, the evening after the funeral, said: "Jamsey, we'll have to go to work very soon. We have only a little money, and it won't last two years if we are well, nor one year if anything happens to us."

Jamsey said: "I start out to-morrow Frau Mueller, but you are too old to work at all. I'll get to work and take care of you," and so Jamsey started.

He tried one restaurant, and the proprietor, with an oath, said he didn't want any children around. "Get out!" He tried another, and there was no vacancy. He answered twelve or fifteen advertisements, but received no reply. He then secured employment in a Bowery restaurant, where on the third day he was brutally beaten by a waiter whom he detected robbing the owner.

He was a plucky boy and was not disheartened. It was very hard however, and it became doubly hard when Mrs. Mueller one morning could not get up, and the doctor said she would have to remain in bed for many weeks.

The new burden acted as a stimulant upon the boy. He was up early in the morning and made the breakfast and cleaned up the rooms. He then arranged medicines and a cold luncheon on the table along side of the bed and then went up into the street to look for employment. An entire month passed, and then, inspired by a happy thought he presented himself one morning before the proprietor of one of the great restaurants of the city.

The proprietor said: "I'm afraid you're too young, my son, but you might go down stairs and see the head chef. He attends to that part of the business." Jamsey was encouraged by the manner if not the matter of the speech and went to the great kitchen beneath the dining hall. The chef had just come in, a handsome, black-mustached, rosy-cheeked Aisatian, who looked at the boy and said: "Well, what is it?"

Jamsey said: "I'd like to be a cook here, sir."

The chef smiled and said in his own language: "What a dear little fellow," then in English, "Can you cook?"

Happily for Jamsey he responded in French, "I think I can cook as well as most men, sir. I'd like to have you try me."

His native tongue aroused the chef's interest. He said, "You speak my language."

"Yes," said Jamsey, "I speak some French."

"Do you speak German?" asked the chef.

"Yes," said Jamsey.

"Can you cook in French and German styles?"

"Yes," said Jamsey, proudly. "Well, you are a brave boy, and I'll try you, anyhow. You go over there to that stove and cook me some lamb chops in some French way and also in some German way, and if they are all right I'll engage you."

Jamsey went to work in a hurry. The other cooks looked on amused by the boy's enthusiasm. He picked out a German sauce which he had learned from Frau Mueller and improved upon himself. For the other dish he made a special sauce which the cooking professor had taught him.

They were about finished, and he had raised the saucepan containing one, when a clumsy scullion going past, either by accident or through mischief, ran against him, and the contents of one saucepan went into the other.

It had no more than happened when the chef reappeared from some other part of the great establishment below stairs. He walked over to where the speechless boy stood and said:

"Hallo, that's a handsome sauce. I don't remember ever having seen it." He took the large spoon that was in it and stirred it. The stirring gave it a finish to the mixture, which made it very attractive to the eye. It was of a rich green, with a wonderful perfume and a smooth, velvety exterior that was very appetizing. The chef raised the spoon and tasted it, smacked his lips and said:

"My son, that is the best sauce I have tasted in ten years. You can put on your cap and apron and go to work now, and I am very glad to get so promising an assistant in my kitchen."

The sauce had been made many hundred times in that restaurant since then and is as popular as ever.

Jamsey has risen to be the second in command and is looked up to by all the other employees of the house, and Frau Mueller has left Rivington street and resides over a very pretty flat near Central Park, where Jamsey makes his home.—Ex.

Frances Willard's Counsel to Girls

Miss Willard was constantly impressing it upon her hearers and readers that every woman, rich or poor, married or unmarried, should cultivate individuality and independence. One of the most characteristic chapters in her breezy, helpful book for girls, *How to Win*, is the one in which she urges every young reader to cultivate a specialty. "By this means," she writes, "you will get into your cranium, in place of aimless reverie, a resolute aim." And she goes on to say:

This is where your brother has had his chief intellectual advantage over you. Quicker of wit than he, far less unwieldy in your mental processes, swifter in judgment, and every whit as accurate, you still have felt when measuring intellectual swords with him that yours was in your left hand, that his was in his right; and you have felt this chiefly as I believe, because from the dawn of thought in his sturdy young brain he has been taught that he must have a definite aim in life if he ever hopes to swell the ranks of the some-bodys upon this planet, while you have been just as sedulously taught that the handsome prince might whirl past your door "most any day," lift you to a seat beside him in his golden chariot, and carry you off to his castle in Spain.

And of course you dream about all this, why shouldn't you? Who wouldn't? But, my dear girls, dreaming is the poorest of all grindstones on which to sharpen one's wits. And to my thinking the rust of woman's intellect, the canker of her heart, the "worm in the bud" of her noblest possibilities has been this aimless reverie; this rambling of thoughts; this vagueness, which when it is finished is vacuity. Let us turn our gaze inward, those of us who are not thoroughgoing workers with brain or hand. What do we find? A mild chaos, a glimmering nebula of fancies, an insipid brain soup, where a few lumps of thought swim in a watery gravy of dreams, and, as nothing can come of nothing, what wonder if no brilliancy of achievement promises to flood our future with its light? Few women, growing up under the present order of things, can claim complete exemption from the grave intellectual infirmity.

Someone one falls so readily into a sort of mental indolence; one's thoughts flow onward in a pleasant, gurgling stream, a sort of intellectual lullaby, coming no-whence, going no-whither. Only one thing can help you if you are in this extremity, and that is what your brothers have—the snap of a fixed purpose in this stream of thought. Around it will soon cluster the dormant ideas, hopes and possibilities that have thus floated at random. The first one in the idle stream of my life was the purchase, lodged there by my life's best friend, my mother, to have an education. Then, later on Charlotte Brontë's *Shirley* was a tremendous snag in the stream to me. Around that brave and steadfast character clustered a thousand new resolves. I was never quite so steeped in reveries again, though my temptations were unusual, my "Forest Home" by a Wisconsin river offering few reminders to my girlish thought of the wide, wide world and its sore need of workers.

The next jog that I got was from the intellectual attrition of a gifted and scholarly woman who asked me often to

her home, and sent me away laden with volumes of Wordsworth, Niebuhr and the British essayists, not forgetting Carlyle and Emerson; Margaret Fuller Ossoli was another fixed point—shall I not rather say a fixed star?—in the sky of my thought, while Arnold of Rugby, to one who meant to make teaching a profession, was chief of all. Well, is it possible that any word I have here written about a definite object in life toward which henceforth you may bend a steady gaze? I am not speaking of a thorough intellectual training only. It is to the life work which only a lifetime can fully compass, that I would direct your thoughts.

CALLING THE FLOWERS.

Wake! daffy-down-dilly, tucked under the nose;
Turn softly, I pray, on your pillow of down:
Come! stretch your sweet limbs now, my pretty, and grow,
Grow fast, to the size of your yellow spring gown.

Little crocus, asleep 'mid the roots of the grass,
Come up for your mantle of purple or gold;
And, my dear, give the snowdrop a nudge as you pass,
'T is time for her white frock, in spite of the cold.

The woodpecker plumes in the orchard, his crest;
And there is a bluebird this minute! The dear!
Wake up, little blossoms! 't is time to be dressed.
Hurry up now, my pretties! the Spring is here!

—Christian Register.

THE HOME CORNER.

FREE PATTERN.

By special arrangement with the BAZAR GLOVE-FITTING PATTERN CO., we are able to supply our readers with the *Bazar Glove-Fitting Pattern* at a very low cost. It is acknowledged by every one that these patterns are the simplest, most economical and most reliable patterns published. Full directions accompany each pattern, and our lady readers have been invariably pleased with them in the past. The coupon below must accompany each order, otherwise the pattern will cost the full price.

MASS. PLOUGHMAN COUPON.

Cut this out, fill in your name, address, number and size of pattern desired, and mail it to THE HOME CORNER, MASS. PLOUGHMAN, BOSTON, MASS.

Name.....
Address.....
No. of Pattern.....
Size.....

Enclose ten cents to pay expenses.

Enclose ten cents to pay postage.

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under the arms and is bowed at the left side. To make this gown for a lady in the medium size will require six and three-fourths yards of forty-four-inch material, or twelve and one-fourth yards of twenty-two-inch goods. The pattern No. 7285, is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure.

A very smart style of coat is worn by the little girls this season—that is the girls under ten years of age says Harper's Bazar. It is made long, fitted at the back, loose in front and buttoned over at the left side. It is of rough gray cloth, and with it is worn a white leather belt and a broad sailor collar of white silk edged with a double ruffle of white ribbon. In front the collar forms revers which reach to the belt. This is sometimes made up in gray or tan corduroy, and is always a very smart little garment. The revers and the coat are worn for every day wear, but there are some short coats which have fancy collars that are very much in fashion. These collars are of silk and lace combined, or all of silk, or all of lace. They are square at the back, and in front form revers, and are fastened with gilt buttons. Blue, brown and tan are the favorite colors, and they are always becoming, because the collar relieves any sombre appearance the cloth might give.

The sailor and Alpine hats are to be the smart styles for every-day wear. For smart occasions the fancy straws trimmed with flower-gardens of flowers are in fashion. The coloring on the hats is particularly charming; the black has a fine, softest straw, are almost flat in shape, and the crown is completely covered with the flowers. Wild flowers, poppies and corn flowers are all greatly in use; while for the Leghorns and white straws the roses and the daisies are preferred. All the hats are a good size, and there is not so much eccentricity displayed in the shapes as was the case last year. Indeed, it would seem as though a great effort were made to have the girls look as youthful and girlish in their dress as possible.

It is in sleeves and skirts that fashion's arbiters have decreed the most decided change since last season, says an exchange. Both have considerably diminished in size, and, while the sleeve has discarded much of the trimmed effects so much in vogue last year, the trimming on this season's skirts is allowed to run riot, as opposed to the almost invariable plain model of the spring and summer of '97.

The names of the new shapes in skirts are the "dip," those that are long and slightly trailing in the back; the "Spanish dounce," the one that has a dounce graduating from the front to the back; the "two-piece circular," this has a bias seam down the front and back; the "three-piece skirt," with gored front and circular and sides and back; and the "four-gored," straight-backed skirt.

Only a master hand should attempt a circular skirt, because it is very difficult to make them hang well. They should be cut crosswise of very wide material, with the selvage at the waist and the hem to keep them from hanging unevenly at the bottom.

The average width of the gored skirts is four yards and a half at the foot. The front is very narrow, with all the fullness massed in the back. It is so shaped as to have no fullness at the top on the front and sides and very little at the back.

One of the most striking new departures in spring skirts is developed in striped materials. These are cut after the two-piece model mentioned above, with the bias angles pointing downward in chevron fashion. A variation of this idea is to have a small apron-shaped hip yoke of plain material to match the groundwork of the stripe, with the circular lower welted on. This is only becoming to tall, slender women.

Skirts with pointed or tunic-shaped overskirts, either real or simulated, are in high favor. The overskirt of these matches the bodice in material, while foundation or under part is a contrast.

A trimming for cloth skirts for dressy wear consists of graduated ruffles of different widths, set on at intervals from the hem to the knees.

Ribbon ruffles are largely made use of on the skirts of both thick and thin gowns.

For the jackets, the three-quarter fly front, the Eton jacket, the close-fitting bodice, the box coat and the Russian blouse are the most popular. The two first are decidedly preferable to the last.

The latest Russian blouse has a smoothly-fitting bodice, no basque or skirted piece, is very closely belted and pouched very slightly in the front.

The close-fitting bodice, with habit back, is best adapted to the short-waisted full figure of the stout woman or one who possesses an absolutely faultless figure. The less elevated, three-quarter fly front or cutaway, with vest, is better adapted to the ordinary figure.

All the jackets are conspicuously short, falling only a few inches below the waistline. The new fly front gives a better curve to the figure than the old one on account of the shaping of the one dart in the front.

Short cutaways, with one or three buttons in front and a coat back are exceedingly swaggy. With these are worn fancy vests in small silk brocade effects, which are very rich and handsome.

Modistes are trying all sorts of experiments in shoulder drapery to do away with the unbecoming effect of uncompromising, snug-fitting sleeve from wrist to shoulder.

The small puff or epaulette, or small loops and bows, are the reluctant compromises Dame Fashion accords for modifying her tight fitting sleeves.

It is whispered that the too-slender-armed woman supplies the deficiencies of nature by a little judicious use of padding. The sleeve models of the present time are especially trying to her.

Transverse stripes of lace or embroidery very inserting is a favorite model for sleeves of gowns of this material.

FIBROID TUMOR CONQUERED.

Expelled by Lydia E. Pinkham's Vegetable Compound—Strong Statement from Mrs. B. A. Lombard.

One of the greatest triumphs of Lydia E. Pinkham's Vegetable Compound is the conquering of woman's dread enemy, Fibroid Tumor. The growth of these tumors is so slow that frequently their presence is not suspected until they are far advanced.

So-called "wandering pains" may come from its early stages, or the presence of danger may be made manifest by excessive menstruation accompanied by unusual pain extending from the ovaries down the groin and thighs.

If you have mysterious pains, if there are indications of inflammation or displacement, don't wait for time to confirm your fears and go through the horrors of a hospital operation; secure Lydia E. Pinkham's Vegetable Compound right away and begin its use.

Mrs. Pinkham, of Lynn, Mass., will give you her advice free of all charge if you will write her about yourself. Your letter will be seen by women only, and you need have no hesitation about being perfectly frank.

Read what Mrs. B. A. LOMBARD, Box 71, Westdale, Mass., says:

"I have reason to think that I would not be here now if it had not been for Lydia E. Pinkham's Vegetable Compound. It cured me of a fibroid tumor in my womb. Doctors could do nothing for me, and they could not cure me at the hospital. I will tell you about it. I had been in my usual health, but had worried quite hard. When my monthly period came on I flowed very badly. The doctor gave me medicine, but it did me no good. He said the flow must be stopped if possible, and he must find the cause of my trouble. Upon examination he found there was a fibroid tumor in my womb, and gave me treatment without any benefit whatever. About that time a lady called on me and recommended Lydia E. Pinkham's Vegetable Compound; said she owed her life to it. I said I would try it, and did. Soon after the flow became more natural and regular. I still continued taking the Compound for some time. Then the doctor made an examination again, and found everything all right. The tumor had passed away, and that dull ache was gone."

Quincy Mutual Fire Insurance Co.

INCORPORATED IN 1851.
COMMENCED BUSINESS IN 1853
CHAS. A. HOWLAND WILLIAM H. FAY
President Secretary

CASH FUND APRIL 1, 1898, \$618,375.75
SURPLUS OVER ALL LIABILITIES, \$299,154.38

AMOUNT AT RISK, \$34,970,596.48
Losses paid in 1897 \$43,125.46
Dividends paid in 1897 \$70,897.29
GAIN IN SURPLUS IN 1897 \$22,984.12

Packed full of everything a housewife either young or old, wishes to know.

Regular Price \$2.00.

FREE COUPON.

Cut this out and mail it to the office of the Massachusetts Ploughman, giving name and address, for one package of

WARD'S INODOROUS CONCENTRATED SOLUBLE PLANT FOOD

ENOUGH FOR 50 PLANTS.

Your plants will blossom more full and remain longer in flower. The fragrance is increased and the leaves are much larger and of a rich, deep color.

Enclose ten cents in cash or postage stamps to pay for costs, to the

Mass. Ploughman, Boston, Mass.

The ARLINGTON SWIVEL PLOW

with Coulters, Jointer and Ground Wheel.

This is the ideal plow for plowing side hill lands or for plowing back and forth without lands. This plow is constructed of mild steel that makes it work equally as well as the regular iron plow. The reversible jointer is a special new feature of great value. You will see how it operates by looking at the above cut. Send for catalogue, price list, etc.

THE BELCHER & TAYLOR A. T. CO.
Box 117 Chicopee Falls,

OUR HOMES.

ELIAKIM.

Yes, I'm a college man, my friend, and '50 was my year. I was a Christian clergyman, it really seems to me. I should give a football match, as I am doing now. I'm a son of a gun, and I see they're looking at me with a look that says, 'You're a fresh man opposite and bear the first away.' I sometimes feel my boy pursues the sport with too much vim.

For one ever last half against Eliaxim. A young fellow, Eliaxim—he's studying to be a lawyer like his father—he is weak and slow to waltz.

And he's the type of humble-minded fellow, but when he looks the center, sir, he always does a path.

And he keeps his old Adam under excellent control. I think it rises when he has to tear a hole.

And those who fancy serious youths effeminate and phony. I think it rises when he has to tear a hole.

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"Oh—she's got on a new dress!" she exclaimed.

Aunt Rebecca beamed with satisfaction. "I thought you'd like it," she said.

Elizabeth clambered down and put the chair and dresser in their places, then she drew a low stool close to Aunt Rebecca and sat down with her. "Arabella May in her arms. Arabella May was a rag doll with wonderful pink cheeks and black eyes, and she was dressed now in a blue dress, trimmed with black velvet like Elizabeth's own. Elizabeth looked down at her in sober content.

"I guess you don't have anything like that at Fannie's," said Aunt Rebecca.

"No'm," answered Elizabeth—"I mean yes! I've got dolls but not like Arabella May."

Aunt Rebecca looked disturbed. "What kind of dolls?" she asked.

"Oh, wax and china, with real hair and silk dresses," answered Elizabeth, looking gently back and forth with Arabella May.

Aunt Rebecca looked out the window; when she spoke there was an odd quiver in her voice. "I guess you must miss them when you come here," she said.

Elizabeth looked up. Oh, I do," she said earnestly, "I mean I can't bear to think of them lying there two weeks without anybody to take care of them. But I love Arabella May the best of all; she's the most comfortable doll I ever saw."

Aunt Rebecca brightened up. "It's most time to get supper," she said, "do you want to come and help?"

"Yes'm, I'd love to," answered Elizabeth. She put Arabella May carefully in one corner of the lounge and then followed her aunt into the next room. "Can I have the rose cup and plate?" she asked.

"Yes, and a rose something else," beamed Aunt Rebecca, "look in the cake box, Elizabeth."

Elizabeth ran and peeped into the box. "Oh! she cried, "why Aunt Rebecca, it's the very loveliest cake I ever saw."

"You can put it on the table, Elizabeth, and we'll have some tonight."

Elizabeth set the cake carefully in the center of the table, while Aunt Rebecca brought out tiny biscuits and cup-sauces and jelly. Elizabeth smiled across the table at Aunt Rebecca.

"Things always taste so good here," she said. "I guess it's because you make them yourself, isn't it, Aunt Rebecca?"

"Fannie never was no hand at cooking," answered Aunt Rebecca. "Elizabeth's bright face glowed a little. "I guess Aunt Fannie'll be lonesome tonight," she said.

Aunt Rebecca set her lips firmly and did not answer. In a minute or two Elizabeth's thought had gone back to the cake and Arabella May and she was chatting merrily.

The next morning Elizabeth came down stairs in the blue dress with an old brown cloak over her arm. "Aunt Rebecca," she said hesitatingly.

"What say?"

"Couldn't I—would it make any difference if I wore my red cloak? I'd wear this dress, you know. The cloak is so—so different from the other girls."

Aunt Rebecca looked up sharply. "I don't see what's the matter with the cloak," she said. "I'd have been glad enough to have one like it when I was your age! But if you don't care enough for me—"

"Oh! I do, I do," cried Elizabeth, running and putting her arms around her aunt's neck. "I'm real sorry, Aunt Rebecca. I don't care much—I truly don't! I didn't mean to make you feel bad."

"There, there, child, it's all right. I'm going to put on your lunch now. You can have the cloak and cookies too."

Elizabeth put on the old brown cloak and hat and took the basket. Aunt Rebecca looked after her as the little figure went slowly down the path. The cloak had been made out of an old one of her own. The material was good, but unsuitable for a child, and the village dressmaker was hardly an expert at cloak-making. As Elizabeth trailed slowly along, the brown cloak almost dragging on the ground, even Aunt Rebecca's unwilling eyes had to acknowledge that the change was not an improvement. She turned quickly away, as if the sight hurt her.

She did the morning work and made some turnovers for Elizabeth; then she went up-stairs and took from a corner of the bureau drawer a little roll of bills. She had been saving them for the new dress she had been wanting for five years. She counted the bills, touching each one lingeringly; then she put them back and went resolutely down stairs. "I guess now you've waited so long it won't hurt you to wait another year," Rebecca said now. "The idea, as old as you be, of fussing over a new dress!"

The day seemed long until Elizabeth came home at half-past three. Elizabeth hung up her cloak and hat and then ran for Arabella May and cuddled down in her favorite seat.

"How did school go?" asked Aunt Rebecca.

"All right," said Elizabeth, contentedly. "Wasn't it funny, Aunt Rebecca—the girls almost didn't know me with my hair and—dress this way? Then Lulu Robbins said, 'Oh, you're just like your aunt's again—you'll have nice lunches now, I know.'"

"Did she say that?"

"Yes'm, and I gave each of them a bite of your cake and they thought it was lovely. They think it's funny 'cause I have two homes and keep changing so. Aunt Rebecca, why don't you and Aunt Fannie go to see each other?"

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was a queer look on her face and she swallowed very hard once or twice. Aunt Rebecca twitched her knitting nervously.

"Elizabeth," she said, "I guess you needn't go to school tomorrow. I'm thinking some of taking you to the city and getting you a spring jacket to wear instead of that brown cloak."

Elizabeth's face was bright again as she looked up.

"Aunt Fannie was going to get me a jacket when I went back there, and I don't believe I mind the cloak, Aunt Rebecca."

"I don't like Fannie's taste," returned Aunt Rebecca, grimly. "I guess I can get you a jacket as well as Fannie."

Elizabeth sat still and thought. It was a strange position for a child to be in—living two separate lives in two different homes, in each of which she was almost idolized. Neither aunt would allow her to wear or have anything given by the other. She spent two weeks at a time with each one. Aunt Fannie was a widow and well off; Aunt Rebecca lived alone on the old home place, and nobody, least of all her sister, guessed how she deprived herself of everything in order to make Elizabeth happy during the visits with her. Perhaps it was the influence of the home where she had been born. Perhaps it was her unconscious recognition of the fact that she was everything that life held to Aunt Rebecca, but certainly Elizabeth loved the old home and older aunt the better, in spite of having to wear such queer clothes there! She might have been spoiled but that her tender little heart loved each aunt so well that her happiness was always shadowed by the separation from one or the other.

And there's something else, too," said Aunt Rebecca, shaking the silence. Elizabeth looked up.

"I guess I'll make another loaf of that cake and let you take it to school; then the girls can have more than a bite."

"Take a whole loaf to school!" grasped Elizabeth.

"Yes," nodded Aunt Rebecca. "I guess they'll like it, won't they?"

"Oh, Aunt Rebecca," cried Elizabeth, "I never heard of anything so lovely!"

The next day Aunt Rebecca took Elizabeth to the city and bought her a gray jacket and hat.

As they came out of the store Elizabeth caught hold of her aunt's hand. "Just look at that window!" she cried.

A florist's was opposite and the whole window was full of Easter lilies—a wonderful maze of curved, silvery petals with stately golden hearts. They were early, for Easter was still a month away—the middle of April, and it was only the middle of March.

Aunt Rebecca hesitated; she knew just how much was left in her purse. "I guess I can go without 'em," she thought. "I've kinder thought it was noughty 'nervous lately."

They went in. The blooming lilies were too expensive. "But I can give you a smaller one that will bloom by Easter," the clerk said.

"Let me see it," answered Aunt Rebecca.

When they came out she carried a heavy pot in her arms, the tall, green stem of the lily swathed in tissue paper nodding above it. From that time Elizabeth watered the lily every day. Just before she left Aunt Rebecca the buds appeared; they calculated and found that Elizabeth would come back the first of Easter.

"So I shall be here to see them open," she cried delightedly.

The afternoon she left she put Arabella May back in the chimney-closet and watered her lily for the last time. Then she went upstairs and took off the blue dress and gray jacket and came down in red once more.

"Good-bye, Aunt Rebecca," she said. "You won't be quite so lonely, will you, because you'll have the lily. And I'll be back to see it open, sure."

The next week seemed very long to Aunt Rebecca. She saw Elizabeth Sunday, when the child ran over to her after church and asked about the lily, but that was all. The week after a new thought came to her. She went down to the city again and came back with another lily. "Elizabeth will be so surprised," she said to herself, and the thought gave an exquisite pleasure to her bare cold cheeks. When she saw Elizabeth Sunday she could hardly keep from telling her.

When Thursday came at last she was busy cooking all the morning and the bare pantry shelves held more than one day than they had held for two weeks before. At three o'clock everything was ready and she sat down by the window to watch for Elizabeth. But no Elizabeth came. She grew nervous and worried. Finally she tried to persuade herself that she had made a mistake in the date, yet she could not bring herself to put away the rose cup and saucer and clear the table, though the sight of the food almost made her sick. About dusk there came a knock at the door. She opened it and saw her sister Fannie. Fannie's face was white and moved as she stood once more in the old doorway and looked back into her old life. But Rebecca thought only of the child.

"Elizabeth!" she gasped.

Fannie put out her hand affectionately, all the old love stirring within her. "Don't be worried," she said. "It isn't dangerous—it's only the measles, but of course she can't come out for a couple of weeks."

Rebecca dropped into the nearest chair, the tears running down her face. She was entirely worn out by the strain of the day and the keenness of her disappointment, yet at the moment it seemed as if she were conscious of nothing except the heavy, sweet odor of the Easter lilies; one had opened during the day.

Fannie looked at her hesitatingly. She was much younger than Rebecca; all through their childhood Rebecca had seemed to her almost as much her mother as her sister, and now she felt once more the old love and difference. Until Fannie married Jacob Stevens there had been but one will between them, and that was Rebecca's.

"Rebecca," she said, "ain't it time we made up? We both love Elizabeth, and it must be lonely for you here alone. I've got money enough for all of us. I thought I'd come and ask you. It's Easter time, too, and it seemed sort of fitting"—she broke off falteringly as Rebecca looked up fiercely.

"When I ask you for money it's time enough to offer it," she said. "I guess I can make out for Elizabeth and me both. I shall have her a month after she gets well. You never seemed to think of Easter before; I don't see why you should make so much of it now, all of a sudden."

The pleading look died from Fannie's face, leaving it set into a stern likeness of Rebecca's; without another word she turned and went out into the darkness.

For a few minutes Rebecca sat as if stunned. Then she rose, and gathering up all the things she had cooked for Elizabeth, put them hurriedly into a basket. She had eaten no supper, but she never thought of that; she carried the food to a poor family in the village. When she came back she was so faint she could hardly walk, but she only ate a couple of crackers and then went upstairs.

The next two days were terrible ones to her. She covered the lilies, but every hour they grew sweeter and no wrappings could mother that haunting fragrance. She grew worn and haggard with the struggle; at last on Sunday she could hold out no longer. She went to church as usual; there were lilies there, but none so beautiful as Elizabeth's; she noticed it with pride—the lilies had a sting for her no more. In the afternoon she went carefully through the house, shutting every room. Then she started out. In each arm she carried an Easter lily. One she wore, the other she carried, and she seemed to feel as she stepped lightly away; she did not falter even when she opened her sister's gate for the first time in her life. Fannie herself came to the door; her face was troubled and anxious. At first she stared incredulously at her sister and then drew her eagerly in.

"Oh! I'm so glad to see you," she said. "Elizabeth's been crying for the lilies—she's sick and half crazy, you know—and I didn't know what to do. I tried real hard to get her some, but I couldn't."

Rebecca stood stiffly in the little hall, her face looking determinedly from between the lilies.

"Wait a minute, Fannie," she said. Fannie was leading the way upstairs; she stopped and looked back. "Fannie, I'm sorry I spoke so the other night. I'm s'pose it's been my fault all along. I'm going to stay and help nurse Elizabeth if you'll let me, and then if you'll both come to the old home—"

Fannie ran down the stairs and threw her arms impulsively around her sister. All the years between seemed to melt away and she was a girl again with her mother—sister Rebecca.

"O Rebecca!" she half sobbed, "I've missed you awfully, but I was too proud to say so. I'm so glad you've come! Do come right up—Elizabeth will be so happy."

Elizabeth was sitting up in bed, excited by the sound of voices, her little speckled face looking out feverishly from the tumbled pillows.

"O Aunt Rebecca!" she cried, "and oh my lilies, my lilies! I did want to see them so! And—why Aunt Rebecca, there's two plants!"

"Yes," answered Aunt Rebecca, with a smile, "one from Aunt Fannie and one from me."

Elizabeth dropped back in the pillows with a long sigh of delight. She was too weak and tired to say more, but she lay there smiling contentedly. About twilight she fell asleep, and her aunt went sitting one on each side of the bed, and they did not move for fear of disturbing her. But they looked happily across at each other, and the lilies shone like stars out of the dusk.—Mabel Nelson Thurston in the Interior.

APRIL.

Dependant Nature holdeth fast Her little lifeless child, and low She shudders at the shroud of snow, And sobs along the frozen blast. But now, behold, the precious form, So closely gathered to her own, Bathed in the tears of pity unknown, Bath tremor faint, and sweet and warm Presses her pulse to hers. 'Tis an awakening heart she hears— O matchless miracle of tears!— And all the infant April stirs.

—Transcript.

ALL ABOUT STANLEY.

BY LOIS WHITNEY.

This is the letter which Lill wrote to her Aunt Lucy:—

My dear Aunt Lucy.—This week I send you my last composition, because mother thinks it will give you a bunch news of us as if she should send her regular letter, and she is so busy she doesn't know how to write. Miss Harris, the new teacher in English in our school, makes us write compositions about things we know all about; and last week she asked us all to write about our brothers, except, of course, if we hadn't any, then sisters, or cousins, or mothers, or something. And I wrote about Stanley, as being more fit for a composition than Roy. I got B on it, and mother said it was a very good one. So Roy says to tell you that we are all quite "delated" over it—meaning, of course, "delated." So good-by. Your loving

LILLIAN.

P. S.—I tell Roy I will write my next composition about him, and then he'll see.

My brother Stanley is just six years old. He is a dear little fellow. I always thought he was handsome, until somebody said he wasn't. But he is always smiling, or almost always; and I still think he is some handsome only it doesn't sound so when you describe him. His hair is rather red; and he has lots of freckles, especially the nose. Mother says they are the prettiest freckles that ever were, but you cannot make freckles sound pretty in a story. Stanley says a great many curious things. He is almost always good-natured, and is willing to do errands for Roy and me, especially if we will give him a stamp to make it even; for we all collect stamps. The other day,

though, he grew real cross because Roy was trying to tease away a stamp that Uncle Will had given him; and he drew himself up as straight as he could, and said to Roy, in a deep, growly voice: "I have made up my mind. I have been too good to this family. I am too good for every one of you. Now I am going to be cross and stingy and mean." The funny part of it was that Roy hushed right up. I heard mamma telling grandma about it afterward; and she said she thought Stanley must have been listening when she read the story in "Pratt Portraits" of the girl who always stood everything, and never got any thanks for it.

Another funny thing happened the other day when Roy's friend Harold had been here. After he and Roy had gone out, mother said, in a still voice, as if she were talking to herself, "What a handsome fellow that Harold Porter is!" Stanley spoke right up, as if he were talking to him, and said: "Yes; but you haven't the least idea how perfectly lovely he is in your best clothes!" Mother looked horrified for a minute; and then she said, "Now, Stanley, do you mean that Harold Porter has been dressing up in my best dresses?" "Oh, yes, mamma," answered Stanley, just as if mother would be so delighted to know it; "and your brown velvet is the most becoming to him of all." But I must say I think that served Roy just right.

Stanley doesn't go to kindergarten any more, but to the boys' school, where Roy goes; and of course he feels very grand about it. The other day mamma thought she would visit the school, just as she always does every now and then. They have a new teacher for the little ones there; and she doesn't know mother, but she thought mother was one of the Hillside teachers, and so she went to the school. When mother went in, Stanley never looked at her, nor showed in any way that he knew who she was. Mother smiled at him once; but he never smiled back, because he seemed to think it wasn't proper to have your mother come visiting. He said the other mothers didn't.

Pretty soon the teacher called him up to read that story about the little chicken, whose mother told it not to go out of the yard; and it did, and the hawk carried it off. She let Stanley read the whole of it. I have heard him read it once since; and I now he will not read it any more, for any of us. He read that part where the chicken says, "I love to make tracks in the nice, soft dust," just as if he really did love it. And so he does. And, when it came to the end, he read, "O little chicken, little chicken! Why did you not mind your mother?" In such a reproachful tone that mother nearly laughed right out; and the teacher said she could never get tired of hearing him read that.

After a while the teacher gave them what they call a "five-minute talk," when they can ask questions, or when she tells them a little story, just to rest them between the study and recitation periods. So she was talking away to them, and telling them about a little lame boy who couldn't go out, and yet thought he had so much to make him happy; and of course she told them how much they had to make them happy and all that, just as people do. Then she asked them what special things they had to be happy about. One boy said his folks, another said skating—only we hadn't had much—and another said not being lame. Then Stanley raised his hand, and mother felt quite proud; but he stood right up there, and said, "I don't know anything; I've got to be happy about it. I know what I'm sorry for." So, of course the teacher said, "What?" And he said, "It makes me feel bad to think that George Washington is dead." Then all the other children wiggled their hands, to say that it made them feel bad, too. The teacher never laughed a wink; but mother choked all up in her haddock-chief, and said she guessed she'd better be going. Then the teacher asked her which grade she taught; and mother had to own up that she was Stanley's mother, and the teacher was surprised.

There is a great deal about Stanley that is very interesting. I never saw a little boy so fond of reading; and he likes such different books, too. He thinks "Pilgrim's Progress" is beautiful, and "The Pink Fairy Book" and the Jungle books, and all the stories of mythology, and all about the knights, Roland and Siegfried and Charlemagne, and all the "Round Table" ones, too. And he just loves it when they fight and cut off heads, and all that. But, if anybody gets low and cannot find his way home, or if anybody's mother dies, then he just howls and cries, it makes him feel so sorry. One night mother was reading Mr. Hale's story, "The Man without a Country," to Roy and me, and we hadn't thought of feeling bad about it yet; and the first thing we knew Stanley just threw himself down on the floor, and cried so hard for poor Nolan, and said the United States was mean not to let him come back, that it just broke up all our reading.

Then, only last week, when mother had been reading all the lovely "Robin Hood" stories to him, she tried to beg off from the last chapter, where Robin dies, because she knew Stanley would feel so badly over it. But Stanley wasn't contented, and so she read it; and when I went in the study, twenty minutes past Stanley's bedtime, there he sat, both of them crying together over poor Robin Hood. Not that I have cried over that, too, though. I could not help reminding mother of what she says about "disciplining the emotions." But that shows you just how Stanley put himself into everything he does. He is just as earnest; and when he plays, he plays hard. He is a very nice boy, and quite a contrast to some others I know.—Christian Register.

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THE HORSE.

Don't Out the Foretop.

Don't cut your horse's foretop off if you ever expect to sell him to a dealer. A shaved foretop knocks from ten to fifty per cent. off of the market value of a roadster, a coach horse, a cob or a saddle horse. The practice of clipping horses' foretops and generally from three to six inches of the mane with it has become a very common one. It never improves a horse's looks, and is rarely beneficial. Once in a great while a short foretop will persist in getting tangled up in an over check, annoying the horse to such a degree that it is but a humane act to cut it off; but the average foretop will never cause any trouble if the horse is properly put on and adjusted. Mr. M. H. Tichenor, probably the most extensive dealer in short-tailed harness and saddle horses in America, tells me that the absence of a foretop has stopped him from buying a great many horses. "I cannot use a horse with his foretop and part of his mane clipped off," said he, "unless I can buy him at a price that will enable me to keep him six months or until the foretop grows out again. Fashion demands that a coach horse, a cob, a hack, a roadster, or any sort of a saddle horse must wear a foretop, and it is a serious mistake to clip it off any marketable trotting-bred horse." Mr. M. Newgas is one of Chicago's most extensive exporters of horses, and ships many trotting-bred coach, park and saddle horses to London and Liverpool each week. When questioned in regard to the practice of clipping the foretops from trotting-bred horses, he said: "It's pernicious. I cannot buy a horse for export if his foretop has been cut off, unless I can get him at half his real value, because the foreign buyers always keep such a horse until the mane grows out again, and they must buy them very cheap to do that. You cannot say too much against that practice in your paper, or caution breeders too often, as the number of trotting-bred horses that come to this market minus their foretops is astonishing."—Horse Review.

The Summer Coats.

As soon as spring opens the winter coat of the colt and adult horse begins shedding, to be followed by a finer growth of shorter hair to furnish the coat of summer, making the ragged jacketed coat of winter put on a smart appearance. A ragged-looking colt in May is evidence that the colt has either been sick or neglected. Farmers and breeders should examine the coats, manes and tails of their horses and colts at this season. The so-called "witches' tangle" should be attended to, for it is classified among the diseases of animals under the head of plica polonica in a special report on diseases of the horse, issued by the bureau of animals industry. The disease is due to the presence of a parasite called the trichophyton sporuloides, by which the hair of men and animals is tangled in such a manner that it has to be cut off. The short growth left is dressed with tincture of iodine, which will destroy the parasite and allow the hair to grow again free and healthy.

The colt's body should be examined, for a parasite of the same genus that causes the skin disease termed "ring-worm," which produces spots all over the body, the back, loins, chest and head especially. Tincture of iodine will destroy this parasite also, but it is necessary to use a whitewash made of quick lime in the stable and yard in which the colts have been running.

It is also necessary to have all harness, benches and other things used washed with soda water and then dipped in corrosive sublimate solution—one drachm to a quart of water. This is done to kill the germs, so as not to have a second outbreak. The clothing used on the colts should be well boiled also.

It is important that the skin troubles should be attended to early, because the coat shows that trouble has existed, thus interfering with the sale of animals. When colts have the surface of their bodies attended to properly they always show up when the sale day comes with a finer polish than the ones that are neglected.—Baltimore Sun.

A HARD DAY'S WORK should bring the reward of a good bed for your horse. The best bed for the money is provided by German Pest Moss. C. B. Barrett, 40 North Market street, Boston.

Boston Cooking School.

All ingredients mentioned in the following recipes are measured level.

The lesson given on Wednesday morning, April 20, was the last demonstration lesson of this season, and included suggestions for every house-keeper. CROWN OF LAMB, Halibut and Tomato Sauce, Chicken and Tongue with Bechamel Sauce, Grape Fruit Salad, Pate de Foie Gras in Aspic and Strawberry Shortcakes were prepared.

CROWN OF LAMB.—This is a very pretty way to serve lamb when entertaining. Select a piece of lamb from the loin containing the ribs and remove the outside skin. Cut between the ribs to the lean meat and scrape the bones perfectly clean as for French chops. Slicer and saw into the form of a circle, the ends of the ribs being turned out and making the points of the crown. Wipe the meat over carefully, wrap around the end of each bone a thin slice of salt pork to give flavor and protect the bone, rub over the meat with salt and sprinkle with flour and a little pepper. If to be served with a gravy, flour may also be sprinkled over the bottom of the pan. Roast about one hour. When served, fill the centre with green peas, spinach, a purée of lima beans, sweet potatoes or chicken nuts. Remove the pork from the bones and trim with paper ruffles. Serve one chop to each guest. The roast may be shaped for one at the market by paying a little extra.

HALIBUT AND TOMATO SAUCE.—The skin and bone should be removed from a slice of halibut and the fish cut with a sharp knife into well-shaped pieces or fillets, rather long and narrow. Season with salt and pepper, and for variety, shape into rolls by rolling them over a fork. Put them into a buttered dish and pour around them the sauce given below. Bake in a hot oven twelve minutes. These were served garnished with hard boiled eggs put through a ricer all over the surface, and strips of the white of the egg laid on, a little parsley being added. The sauce gave a very good flavor to the fish.

TOMATO SAUCE.—Cook one and one-third cups of tomato, one-half cup of water, one slice onion, three cloves, a sprig of parsley and bit of bay leaf fifteen minutes; add to two tablespoons of each of butter and flour which have been browned. Season with salt, pepper and cayenne.

CHICKEN AND TONGUE WITH BECHAMEL SAUCE.—Arrange slices of chicken and tongue around a mound of spinach and pour over Bechamel Sauce or serve the sauce with it. Salted tongue is not as suitable for this. The spinach should be thoroughly washed, and unless very young and tender, put on to cook in plenty of water, leaving it uncovered so as to preserve the green color. Drain thoroughly, chop finely and re-heat. If very young and tender, it may be cooked in its own juices, with the addition of such water as clings to it after washing.

Remnants of tongue may also be served in a currant jelly sauce.

BECHAMEL SAUCE.—Cook one and one-half cups of chicken stock ten minutes with a slice each of carrot and onion, a sprig of parsley and a bit of bay leaf and of mace. Add to one-fourth cup of each of butter and flour cooked together and one cup of cream; season with salt, pepper and cayenne. Pour over the meat and sprinkle with chopped truffles. The cream should be added only just before serving.

GRAPE FRUIT SALAD.—This is a very pretty and simple salad, being sections of grape fruit served on lettuce with mayonnaise. Prepare the grape fruit by removing the outside skin and every bit of the inner white skin. Slip a sharp knife under the skin separating the sections and remove it, leaving the pulp entirely free from any skin. Oranges may be prepared and used in the same way, although navel oranges will be found difficult to do. No bitterness will be noticeable when prepared in this way. The grape fruit should be chilled before serving.

PATE DE FOIE GRAS IN ASPIC.—Add to one quart of highly-seasoned chicken stock (which has been cleared) two tablespoons of gelatin soaked in three tablespoons of cold water. Harden a layer of jelly in small moulds, decorate, put in foie gras, cover with jelly, and harden. Serve on a bed of watercress with mayonnaise.

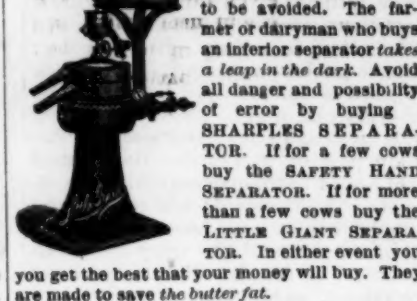
This was a very artistic dish. The aspic was moulded in small half spherical moulds, and decorated with tiny shapes cut from the yolks and whites of hard boiled eggs and slices of radish, with bits of parsley. The foie gras may be purchased canned.

STRAWBERRY SHORTCAKES.—Sift two cups of flour, four teaspoons of baking powder, one-half teaspoon of salt and one tablespoon of sugar. Rub in one-third cup of butter, add about three-fourths cup of milk; roll out in rounds, rather larger than biscuits, and bake in a hot oven twelve minutes. Split, butter, and fill with sweetened berries, and serve with cream.

Horse Owners! Use GONNARD'S Caustic Balsam

A HARD DAY'S WORK should bring the reward of a good bed for your horse. The best bed for the money is provided by German Pest Moss. C. B. Barrett, 40 North Market street, Boston.

A Leap in the Dark



It is always dangerous and to be avoided. The farmer or dayman who buys an inferior separator for a leap in the dark. Avoid all danger and possibility of error by buying SHARPLES SEPARATOR. If for a few cows buy the SAFETY HAND SEPARATOR. If for more than a few cows buy the LITTLE GIANT SEPARATOR. In either event you get the best that your money will buy. They are made to save the butter fat.

P. M. SHARPLES, West Chester, Pa.

These were individual shortcomings and very attractive. The berries should be put in a warm place to draw out the juice. Spread the berries both between and on top, putting the top crust side down so that the strawberry juice will be absorbed by the shortcake. Strawberries are not plentiful, but only a layer between and garnish the top with whipped cream, sweetened, putting on with a pastry bag and tube.

This lesson closed a very successful series of lessons, the first in the Cooking School's new home. There will be an extra lesson on Marketing, Wednesday afternoon, April 27, at two o'clock, for which the admission will be the same as usual, fifty cents.

The Employer's Rights.

The same general principles that govern a just relation between employer and employee elsewhere apply also in the relations between the farmer and his hired help. The farmer invests money, lays out work for a season, goes in debt, takes risks; he hires a man for good wages to help do the work, carry out the plans and bring the risks to a successful issue. No matter whether the plans succeed or fail, no matter whether the farmer makes or loses money on the season's work, the hired man expects his wages—and he gets them, too.

With certainty of pay for his work, and with absolutely no share in the risks, the hired man is surely under some definite obligations to his employer in regard to the amount and kind of work he does and the manner in which he does it.

On the other hand, from the very nature of the case, the man who hires out to a farmer to do a summer's work also has certain rights which he may justly expect without fail from his employer.

But an employer forfeits his right to exact such conduct if he hires a man whose moral nature or training is so defective as to make this conduct impossible, even with such admonition and corrective measures as an employer may properly use. In other words, no man need hope to hire an angel to do his dirty work, and the time to determine whether an applicant is morally and socially up to the standard desired is before you hire him.

Again, an employer who pays the wages of a good and efficient hand has the right to expect the work of such a hand. But, as the employer knows the nature and severity of his work, it rests upon him to see that the applicant is of sufficient physical strength and maturity.

When service is actually begun, the first and foremost among the employer's rights is strict and unquestioning obedience to orders. No matter how unimportant or even foolish it may seem to the hired man whether a thing be done so or not, it is his business to understand exactly what is asked of him and to do it exactly as told, whether the reason is plain or not.

Directly in line with this is also the right of the employer to the best conscientious judgment of his hired man in cases where it clearly would further or improve the work to vary the orders.

There is hardly a farm work that can be carried on for more than half a day, in the absence of the master, without the exercise of intelligent judgment in addition to strict obedience to instructions. The diligent and conscientious exercise of such intelligent judgment is one of the most important rights of an employer. Upon its exercise often depends the success or ruin of the work. Very few hired men realize their obligation to their employers in this respect; few know of the worry, vexation and money loss often caused to the helpless employer by their brutal neglect of this plain duty.

Though this article can not go into details for instructing either the farmer or the hired man, there is one kind of farm work that causes so much dissatisfaction between employer and servant that it must be mentioned here. This work is a daily work, a necessary work, an absolutely unavoidable work, a work that properly falls to the hired man, and yet a work that almost every hired man hates, shirks, dodges, shirks in every way he thinks safe—I mean the work of caring for the team he drives and doing such chores as are assigned to him as part of his daily task.

In violation of this right of the employer, and of the dumb beasts to proper care, I have seen hard-worked horses stunted in food and water by the lazy hired man in a way that merited a "knock-out" blow square between the eyes of the offender. I have

seen employers worried, tormented and damaged financially beyond endurance by the utter moral callousness to their duties of hired men on this point of doing properly such barn chores as are assigned to them. Doing chores is not a most agreeable work, nor can all men learn equally well to feed and care for stock. But the work must be done by some one; on its proper performance, Sundays and week days, depends part of the employer's income, and it is a plain right of the farmer to have it done without continual supervision and reminding. It is the plain duty of the hired man, who doesn't want his own conscience in later years to class him with robbers, to do this work, do it on time, do it right and do it in a way that will relieve his employer of worry about it.

Last, and possibly most important and least recognized of all, is the employer's right to expect the hired man to take such care of his own health in eating, drinking, sleeping, dress and manner of working as will enable him to report for business every morning promptly and to work cheerfully and with vigor during the day.

Under this head the one thing that makes more just cause for complaint by employers than any other is staying out late at night by hired men. Late hours mean loss of sleep; loss of sleep means reduced energy, languor, stupidity the following day. There is no getting around that fact.

Let not the patient farmer who reads this and whose soul has been sorely tried by ignorant, careless, tricky, deceitful hired men in a score of other ways than those I have mentioned—let him not imagine that I fail to speak of all that because I don't know about it. Well, I do know about it, but I have presented only what seemed to me the most important and the least respected rights of the farmer who hires help.—Cinn. Com. Gazette.

Cost of the Civil War.

The New York Journal of Commerce has published an article showing the enormous expense of the civil war. In the four years of the war the direct expenditure of the National Government amounted to about \$3,180,000,000, of which \$2,920,000,000 should be charged to the war. Of this amount \$730,000,000 was raised by taxation, while \$2,450,000,000 was obtained by issuing greenbacks and bonds. The interest on the war debt during and since the war to July 1, 1897, amounts to \$2,664,000,000; pensions since the war \$2,127,000,000, making the total cost of the war to the end of the last fiscal year \$7,711,000,000. Much of this expense is continuing, and if we are to believe a recent statement of the Commissioner of Pensions, the pension part of the expenditure is to be increased. The country is now paying in pensions and interest money on account of the civil war about \$3,500,000 every week. The Journal of Commerce estimates that by the time all the liabilities are settled, the money cost of the late war will have amounted to no less than \$12,000,000,000, a sum equal to the entire assessed valuation of all the property in the United States at the beginning of the conflict.

A Belmont, Mass., Baby.

"My baby, when five months old, broke out every now and then with a rash which burned like fire and caused him much suffering. I began giving him Hood's Sarsaparilla and soon saw it was doing him good. When he had taken three bottles he was cured." Mrs. T. Vignin, Belmont, Mass.

Hood's Pills are the only pills to take with Hood's Sarsaparilla. Cure all liver ills.

Cauliflowers which are sown in the hot bed in February, should be set out early in April; about 15 by 24 inches apart, and cultivated about the same as cabbages. There is no use in trying to grow cauliflowers unless the land has been made extremely rich.

BITS OF FUN.

Arthur: They say, dear, that people who live together get to look alike. Kate: Then you must consider my refusal as final.

A Chance for Inventors: Johnny Hay: What kinds of engagement rings d'ye sell? Polite Jeweller: All kinds. Johnny Hay: Well I want one a girl can't sneak out of—Jeweller's Weekly.

A Glens Falls teacher was trying to impress on the class the lessons of Washington's Birthday, and among other questions she asked: "If the Southern Confederacy had succeeded, what would Washington have been the Father of?" "Twins," was the prompt reply of one of the boys.—New York Tribune.

ST. LAMBERT. A. J. C. C. JERSEYS.
Young ones For Sale. Send for Prices and Pedigrees.
HOBART FARM, Dover, N. H.,
J. W. HOBART, 75 Tremont St., Boston.

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NEW MAIL
REDUCED TO \$65.
Highest Grade—Latest Improvements.
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Best Medium Priced Wheels in Market.
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Boys' and Girls' \$30, \$25, \$20.
Closing out a few men's and ladies' 28 and 30 inch High Grade Wheels, at \$10, \$15, \$20, etc.
The place to buy Bicycles.
Wm. READ & SONS,
107 Washington St., Boston.
Established 1826.

Little Barbara, on seeing a dish of lemon jelly placed upon the table, exclaimed, "Oh, mamma, see how nervous that jelly is!"—Youth's Companion.

An Englishman came to New York, and put up a sign, "Established 1804," and rather prided himself upon the antiquity of his establishment. The next day his Yankee rival across the way buried his sign in this way: "Established yesterday. No old goods on hand."

Doubting Woman: Really, now, are these eggs fresh? Grocer: Madam, if you will kindly step to the telephone and call up our farm, you can hear the hens that laid those eggs still cackling.—Cincinnati Enquirer.

"Have you given up your idea of mastering some European language?" said the courtier. "Yes," replied the Chinese emperor. "What's the use? There is no means of telling which I will need in order to talk to my neighbors."—Washington Star.

One of the most remarkable features of life in New South Wales is the transformation of criminals into hard-working citizens. Of the thirty thousand settlers there in 1821, twenty thousand had been convicts. It is said that on board an American liner, a boastful Australian asserted loudly, and over and over, that "the men who settled Australia were a remarkably sensible lot." "Yes," said an American, quietly, "I have always understood that they were sent out by the very best judges."

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The Woman's Home Companion has no equal in the excellence of its special departments devoted to Fashion, Fancy Work, Housekeeping, Floriculture, Talks with Girls, Mothers' Chat, Home Adornment, Children, etc. Of the noted writers who will contribute their best work to the columns of the Companion during the coming year we have space to name only a few: Mrs. Mary J. Holmes, Josiah Allen's Wife, Ople Read, Harriet Prescott Spofford, Julia Magruder, Hezekiah Butterworth, and many others. The Companion gives 24 to 32 pages, size 11 by 16 inches, each issue, printed on fine paper and put into a handsomely illustrated cover. Specimen copy free upon request.

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